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Official Publication of the Medical Society of Virginia

VOL. 69. December, 1942 No. 12.

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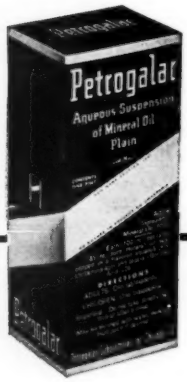

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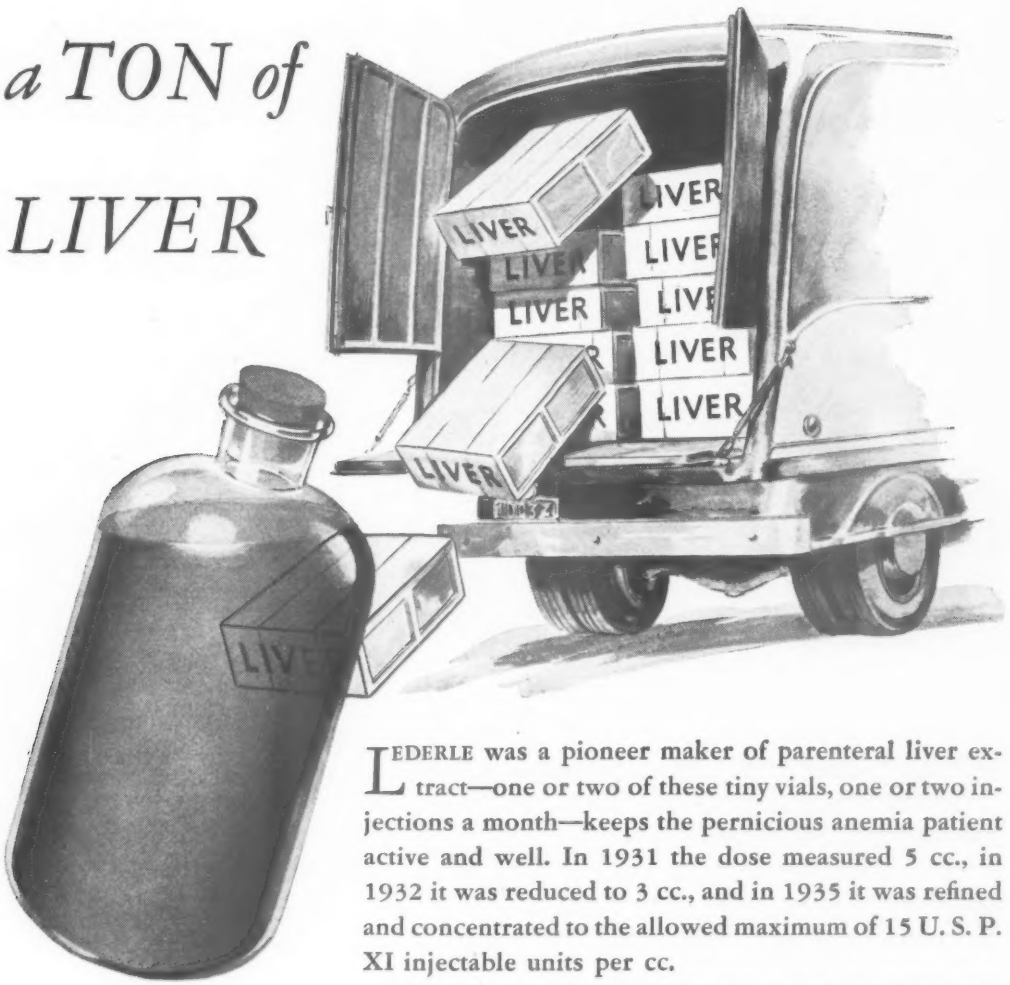

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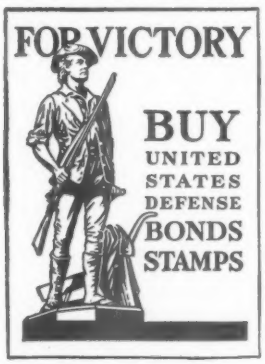

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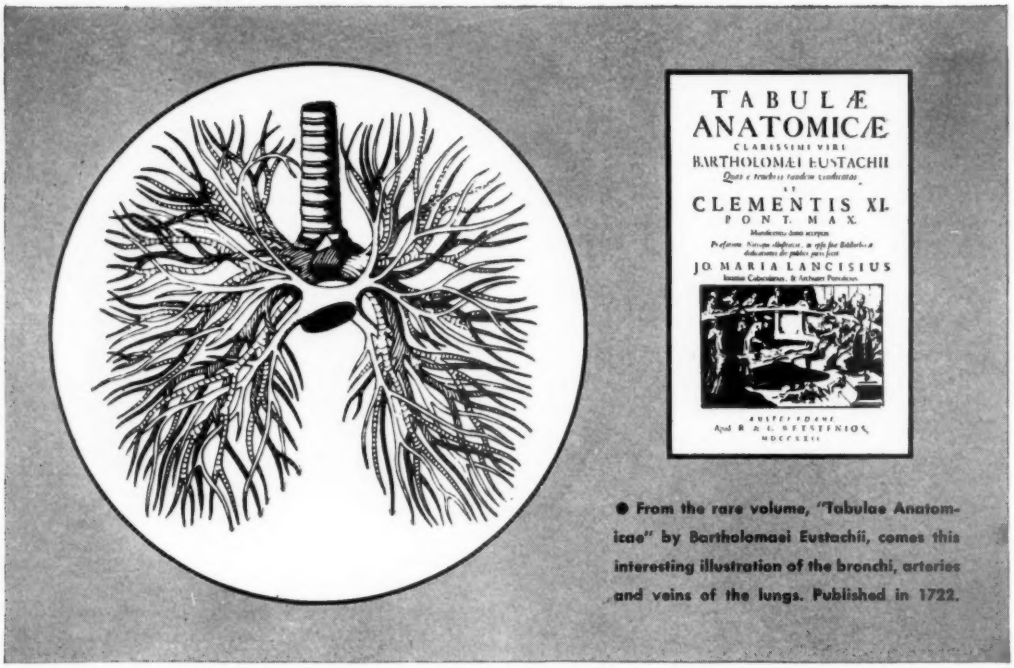

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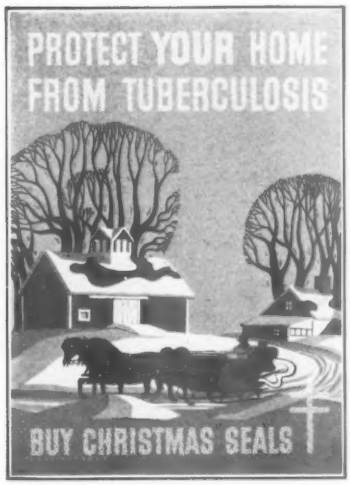

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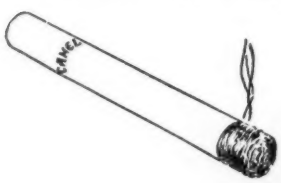

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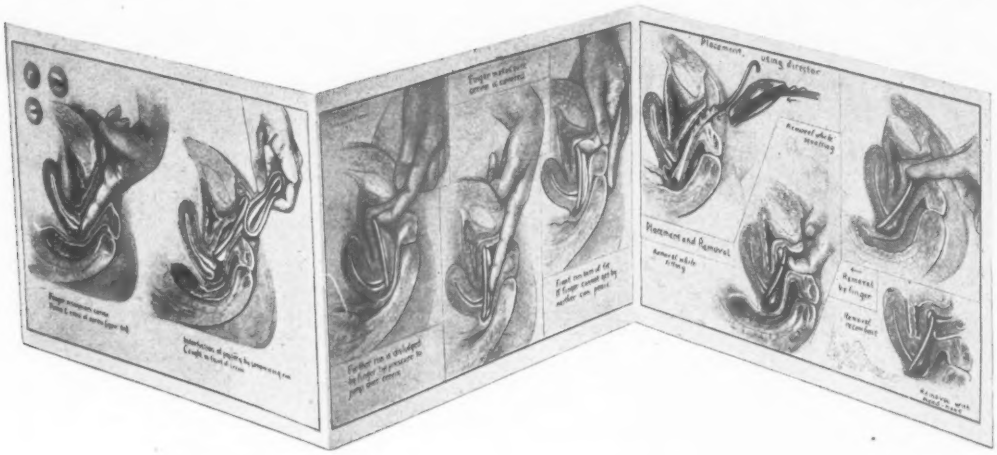

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DECEMBER . . . the star of Bethlehem and the bombs of Pearl Harbor . . . the Prince of Peace and the god of war ☆ Christmas will have little meaning to the thousands of physicians who serve their country and perhaps to thousands more who strive to carry on at home. There is little time for exchange of pleasantries in the grim business of winning a war ☆ But the Christmas Season will come again when the forces of evil are dead—when man again will do unto others as he would have done unto him.

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Guest Editorial

Loyalty of Selective Service Physicians

"IF YOU want a job well done, get a busy man to do it." This is indeed a wise maxim, for surely the Virginia physicians are a busy lot these days, and the job that they are doing for the Selective Service System is an all important job well done.

Over 75,000 man hours of professional service have been their contribution to the effort by examining men to be inducted into the Army. This service rendered by the Virginia physicians to their Government, computed in man hours, means no less than 9,375 eight-hour days, or, according to the Department of Labor, forty-hour week standard, a total of 1,875 weeks or 36 years of service crowded into twenty-four months by the combined 900 Virginia physicians.

The Medical Section of the State Headquarters for Selective Service began to function October 5, 1940, and now, after two years of dealing with Virginia physicians and observing their loyalty, it is a source of great pleasure to comment on their fidelity to their country.

Virginia physicians responded promptly to our call and, during the past two years, 150,000 examinations have been made by the 900 physicians designated as examining physicians, members of Medical Advisory Boards, and Appeal Boards. Their loyalty, efficiency and promptness is best known by us and this intimate knowledge of their work qualifies us to certify to the true character of Virginia physicians. A brief, and therefore inadequate commendation, is that their presence has always indicated their willingness to serve and assume responsibility for the conduct of a case. They imply a reasonable professional knowledge and a strong desire to use their every effort for the welfare of their patients with sympathetic understanding, patience, and discretion, until cure, death, or dismissal terminates the obligation.

The patients by their calls have implied confidence in the professional ability of the physicians, and faith in them as men of honor. They have, by the same token, without reserve placed the professional conduct of their affairs in the physicians' hands, offering opportunity for the fullest exercise of judgment. Accordingly, we hold the opinion, from close relationship with Virginia physicians for the past two years, that seldom or never are patients' lives placed at a hazard in Virginia.

Medical education, medical ethics, and medical doctrines have taught physicians to place the welfare of patients and people above everything else. Seldom is it observed that Virginia physicians allow financial returns to conflict with that welfare, which is not only emphasized, but proved by their labor for Selective Service in the past two years without compensation.

This spirit deserves commendation. It has a meaning for others, it is inspiring to know about, and we feel obligated to such institutions as the Medical College of Vir-

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ginia and the University of Virginia Medical School for those doctrines that were taught as early as 1838 and are supported as loyally today as those pioneers of the yesteryear intended them to be enforced.

Virginia physicians have shown their loyalty as citizens on many occasions, and while we are not asserting that they are more loyal than others, or that they have more character than others, their opportunity in battle, or times like these, provides an outlet for their instincts. When we observe that they draw no line between enemy and friend, by suturing the wound of a captured prisoner with the same care as they would that of one of their own soldiers, it goes only to emphasize again that they are the carriers of major cultural values.

Offices, headquarters and sections are either successful or not successful for a reason; so when we report that the medical section of this headquarters has functioned successfully for two years, we also have the reason—it is loyalty and character of Selective Service Physicians.

The State of war has enlarged the scope of the Hippocratic Oath and, Virginia physicians in responding so nobly to the call of the State Headquarters for Selective Service, have lived up to the letter of the law of their sacred oath, and earned the appreciation and gratitude of the Selective Service Headquarters. However, no praise or commendation for a job well done ever equals the self satisfaction of the individual for what he knows in his heart is conscientious effort, and such being the case, the physicians of Virginia can look upon the work that they are performing for the Selective System with justifiable pride and satisfaction.

ERNEST T. TRICE, LT.-COLONEL M. C.,
Medical Advisor, State Headquarters for Selective Service.

FOCAL INFECTIONS*

ALAN C. WOODS, M.D.,
Ophthalmologist-in-Chief, The Johns Hopkins Hospital, Baltimore, Maryland.

One of the most important doctrines in American ophthalmology is the belief that certain inflammatory ocular disorders are caused by remote foci of infection—the theory of focal infection. This concept of the cause of certain systemic diseases and remote localized inflammations was introduced by Hunter in 1901,[1] and was elaborated chiefly by Billings from 1910 to 1916. During this same period E. C. Rosenow published his dramatic reports on the transmutation of bacteria, and the experimental production of diseases of joints, endocardium, gallbladder, stomach, duodenum, etc., by the injection of bacteria isolated from similar disease foci in humans. In 1916 Billings[2] in his Lane Medical Lectures reviewed the entire subject of focal infection to date, and presented the clinical and experimental observations which he believed substantiated the theory, removed it from the general class of theories, and established it on a scientific basis.

This theory as presented by Billings in 1916 may be summarized as follows: A primary focus of infection is a circumscribed area of tissue infected with micro-organisms and located usually in the tissues communicating with a mucous or cutaneous surface. From this primary focus of infection, either by hematogenous or lymphogenous pathways, usually the former, systemic infection and intoxication may occur, and the infecting organisms spread to other remote tissues of the body and there produce secondary foci of infection.

The primary focus of infection may be in the teeth in the form of a periapical abscess or pyorrhea alveolaris, in the tonsils, in subcutaneous abscesses, in the accessory nasal sinuses, in the respiratory tract, including bronchiectasis, in the gastro-intestinal tract, including the rectum with its rich sup-

*Read by invitation before the Richmond Academy of Medicine, Richmond, May 12, 1942.

ply of hemorrhoidal veins, the auxiliary organs of digestion, including such conditions as cholecystitis, appendicitis, intestinal ulcers and intestinal stasis; the genito-urinary tract, including conditions such as endometritis, salpingitis, seminal vesiculitis, prostatitis, cystitis, and pyelitis. From such primary foci the adjacent lymph nodes may become secondarily affected, so that even when the primary focus is eradicated and healed the secondarily infected regional lymph nodes may remain as reservoirs from which the infection may spread.

The infection in these primary foci is exogenous. In the mouth this may arise from the normal bacterial flora, assisted by the action of entamoeba buccalis, with resulting infection of the peridental membrane and subsequent pyorrhea and periapical abscesses. The tonsils become infected by contaminated air and infected food. Obstruction of the upper air passages prevents proper drainage of the nasal cavities and in turn produces infection of the accessory nasal sinuses, middle ear, mastoid, mucous membranes of the nose, and later of the bronchi. Focal infection of the gastro-intestinal tract may arise from auto-infection or auto-intoxication of the intestinal tract, including intestinal stasis. The gallbladder, stomach, pancreas and appendix may be secondarily involved by hematogerous infection from an original primary focus in the teeth, tonsils or nasal sinuses, and may thereafter serve as primary foci for further infection. The genito-urinary tract may become infected by pyogenic bacteria at childbirth, by abortion or miscarriage, and especially by venereal infection with the gonococcus.

From the primary foci of infection disease is assumed to spread to other portions of the body. The reason why all individuals do not become ambulant museums of pathology (since more or less primary infection is inevitable in even the most carefully regulated existence) is, first, on account of the normal resistance mechanism of the body, the leucocytes, phagocytes, etc., and, second, by the formation of specific antibodies against the infecting micro-organisms which neutralize their harmful effect and inhibit their activity. Certain individuals are naturally more susceptible to infection than others, and it is in such individuals especially that secondary infection takes place. The susceptibility to secondary infection is increased by debilitating disease and exposure to cold with the resulting vaso-constriction.

The mechanism of the secondary infection is usually hematogenous by direct bacterial metastasis from the primary focus through the blood stream. Lymphogenous infection is usually limited to direct extension from the primary focus to the adjacent lymph nodes, where a secondary reservoir of infection may be established. The possibility of the influence of exo-and endo-bacterial toxins is also mentioned by Billings, and the possible importance of sensitization of the tissues from the primary focus is likewise briefly discussed, but dismissed as a subject for further investigation. The local reaction in remote lesions secondary to a primary focus is endothelial proliferations of the lining of the blood vessels with or without thrombosis; but resulting in blocking of the vessels with hemorrhage into the immediate tissues, positive chemotaxis with multiplication of the leucocytes and plasma cells, and in cases where the infecting organisms are of low virulence, fibrinoplastic exudate with connective tissue proliferation.

Secondary, or systemic disease from a primary focus may affect various tissues of the body. The usual acute diseases believed produced by focal infection are listed by Billings as acute rheumatic fever, endocarditis, myocarditis and pericarditis secondary to rheumatic fever, pancreatitis, chorea, systemic gonococcus infection, gonococcal arthritis, acute nephritis, cholecystitis, acute gastric and duodenal ulcer, erythema nodosum, acute osteomyelitis, and diseases of the eye, especially iridocyclitis and uveitis.

The evidence in favor of this concept of focal infection, as outlined by Billings and others, is as follows: *First,* small primary foci of infection are constantly found in association with these secondary systemic and focal diseases, and quite frequently there is no other cause such as syphilis, tuberculosis, etc., to account for the secondary disease. *Second,* there are evidences of transient bacteremias in individuals with small primary foci of disease and secondary systemic disease. Such are the recovery of streptococcus viridans from the blood stream of individuals with early endocarditis, the report by Rosenow[3] that in acute rheumatic fever the same streptococcus can be simultaneously isolated from the affected joint exudate and capsule, from the tonsils, alveolar processes of the teeth, and the circulating blood; and a similar report by Billings that in chronic endocarditis the streptococcus viridans can be simultaneously isolated from the alveolar process

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of the teeth and the circulating blood. *Third,* the selective affinity of certain bacteria for certain tissues. This property Billings believed was fully established by the experimental work of Rosenow,[4] which indicated that organisms isolated from certain diseased organs or tissues of patients, when injected into animals, produced practically identical lesions in the corresponding tissues or organs of the experimental animal, with far greater frequency than was observed in the controls. This property of elective affinity, or tropism, might be produced or enhanced by cultivating the organisms on media containing the specific tissue. *Fourth,* the well known and recognized exacerbations of arthritis, myositis, or iridocyclitis that often followed early or radical surgery on the primary focus, this arguing strongly for a causal relationship between the two diseased areas. *Fifth,* the again well-known and recognized clinical improvement that so often occurs in the systemic or secondary disease when the primary focus is eradicated, which was assumed to indicate an end to the bombardment of the secondarily diseased tissue by transient bacteremias from the primary focus.

This theory offered a ready and plausible explanation for many of the problems of localized endogenous infections. When frank sepsis was not apparent, the manner in which such protected structures as the endocardium, the joints, and the uveal tract of the eye might become infected with bacteria had never been clear. If primary diseased foci such as the teeth, tonsils, genito-urinary tract, etc., which might obviously become infected from external sources, could produce a transient bacillemia and the bacilli thus introduced in the blood stream lodge in the endocardium, joints, eyes, etc., the etiology of infection of these tissues was clear. Thus the theory of focal infection offered a logical solution for the problem.

Like all new theories, this idea was immediately accepted by many without question, and there ensued a widespread and somewhat indiscriminate eradication of primary foci of infection as a therapeutic procedure for an almost infinite number of pathological conditions. The literature soon became filled with glowing reports of brilliant cures of various obscure diseases following the removal of the teeth, the tonsils, the drainage of the accessory nasal sinuses and such procedures. However, it soon became apparent to all, except the most rabid advocates of the doctrine of focal infection, that in many instances the sacrifice of the teeth, the removal of the tonsils, etc., was without any effect on the diseased condition for which the procedure had been undertaken, and the final condition of the patient was no better, but indeed often worse than before his submission to these various surgical ordeals. These unhappy results were boldly discounted by the focal infection advocates as due either to the spread of the primary focus beyond the bounds where it could be completely removed, or to the already firm establishment of the secondary focus.

Other observers and investigators, more critical and less credulous, questioned various points of the theory, and sought an explanation of several pertinent questions which could not be accepted on faith alone. The elective affinity of bacteria for specific tissues, and the question of transmutation of bacteria was immediately questioned by many bacteriologists and pathologists. It was likewise pointed out that primary foci of infection were very frequent and often multiple in many normal individuals, and that it was peculiar that the secondary disturbances in the joints, the endocardium, or the eye, should be caused by rather small foci in the teeth, or tonsils, and not from such massive infections as empyema or psoas abscess. Some means of determining if a demonstrable focus of infection was causally related to the secondary disease was therefore sought. To this end the primary focus was cultured and tests were made to determine if the affected individual was unduly sensitive to the specific organism isolated from the primary focus. The complement fixation and the agglutination reaction of the blood serum were employed to ascertain if there was any undue systemic reaction to the organisms cultured from the primary focus and, if so, what fraction of the general antigenic mosaic, the filtrates, exotoxins, or nucleoprotein of the bacterial body might be responsible for such reactions. These laboratory investigations were in the main futile, the general run of all normal and diseased individuals showing more or less reactivity to the organisms in the primary foci, to which they were constantly exposed.

However, despite these various objections and much negative laboratory investigation, in the decade following Billings' articles the doctrine of focal infection became firmly ingrained in American medical practice, and the search for primary foci of infection and their eradication when possible became

the generally accepted procedure in the treatment of many localized infections, especially endogenous diseases of the eye, for which there was no obvious explanation, such as syphilis. In 1928 the literature, including laboratory investigations, was summed up by Holman[5] in a critical review. While accepting a causal relationship in many instances between primary foci of infection and remote disease, he pointed out the extreme diagnostic acumen required to decide if any determined focus of infection was causally related to the secondary disease, and that efforts to develop procedure of any diagnostic accuracy to determine this had been fruitless. In reviewing the evidence in favor of a relationship between primary foci of infection and secondary disease, Holman pointed out there was some suggestive evidence in the studies of sensitivity to the organisms from the primary focus which might indicate an undue reaction to these bacteria. The dissemination of organisms from the tonsils and teeth was, to a large extent, due to local anatomical peculiarities. As a result of exogenous infections, such as cause the common cold, the crypts of the tonsils may close and ulcers form in the base of the crypts. The epithelium of the crypts differs from that of the tonsils proper, having papilli and an underlying rich network of capillaries.[6] This epithelium is destroyed in chronic tonsillitis, and pressure on the tonsils can force bacteria into circulation.[7] The constant periodic compression of the tonsils in the act of swallowing suggests that this must be the mechanism where bacteria from the tonsils gain access to the blood stream. In the case of the teeth, the thinness of the epithelium covering the gingival crevices, the occasional breaks in its surface, and imperfect junction make this a weak point, where bacteria gain access and produce pyorrhea alveolaris.[8] Periapical abscesses may arise secondary to either pyorrhea or from the root canal of infected teeth. The rich capillary circulation of the gums facilitates entry of the bacteria to the blood stream. The evidence in favor of the gastro-intestinal tract acting as a focus of infection was analyzed without any definite conclusions. Holman then reviewed the extensive literature on the relation of cholecystitis, pancreatitis, and nephritis to focal infection, and emphasized that in each instance the anatomical peculiarities play a large role in the localization of bacteria in these structures. Rheumatism and joint diseases present a most complex problem, and Holman says quite definitely that the extensive investigations on these subjects indicate that the fundamental basis of all these rheumatic manifestations is a condition of hypersensitiveness to numerous exciting causes. The influence of other factors, common colds, heat and cold, diet, vitamin deficiency, and fatigue in the production of focal infection was clearly indicated by many investigators on these subjects. However, the elective localization of bacteria, held by many as sufficient cause in itself to account for the localization of focal infection, was held by Holman not to have been confirmed. The weaknesses of Rosenow's experimental work were pointed out, and the extensive investigations on the subject reviewed. While Holman concedes that a general bacteriological adaptation to environment is universally accepted and cannot be denied, and while it is clearly proven that streptococci can cause certain lesions throughout the body, nevertheless, it is a fifty per cent chance whether any particular localization occurs with a "specific" or "non-specific" strain. Summing up the extremely extensive literature, Holman concludes that the doctrine of focal infection has changed from a theory to a definite principle of great importance in numerous diseases of man. The factors determining the localization of bacteria in any tissue are those which alter the nutrition of the cells of those tissues, particularly the endothelium of the capillaries. The factors determining the invasion of the bacteria from the primary focus are dependent largely on the local circulation about or in the focus, especially dilatation of the capillaries and sluggish circulation. However, when a focus of infection is discovered, and considered responsible for a diseased condition, it requires the highest type of diagnostic ability to prove this is true. The recovery of the patient is insufficient, for this may be due to the general tonic stimulus resulting from the removal of one cause of lowered systemic resistance. Failure to effect a cure is likewise insufficient evidence against the relationship of the primary focus to the disease, for the secondary disease is often so well established when the primary focus of infection is discovered that the damage already done is irreparable.

The case of focal infection, even with the conservative reservations of Holman, was, however, far from settled. The critics of the theory freely conceded that in the sense gonorrheal arthritis was related to gonorrhea, furuncles to septicemia, tetanus

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to a localized infection with tetanus bacilli, the origin of such systemic diseases to primary foci of infection was well established; but the idea that various diseases of unknown origin are related to infections of the teeth, tonsils, and other such localized foci met with steadily increasing opposition. In 1940 the views of this opposition and the supporting evidence was ably summarized by Reimann and Havens in a well documented review.[9]

Reimann and Havens especially analyzed the evidence against infected teeth or tonsils being related to remote localized disease. The evidence against so-called "infected" teeth acting as a reservoir whence infection might be disseminated to remote tissues of the body was summarized as follows: *1.* The bacteriological studies of apically infected teeth are questionable on account of the technical difficulty of preventing contamination during extraction;[10] that even when bacteria are present there is usually no evidence of infection of the adjacent tissues, and the mere presence of bacteria does not mean they are pathogenic. *2.* The diagnosis of periapically infected teeth is usually made by roentgenological study. This may be fallacious, for many of the radiolucent areas about the roots of teeth are not caused by infection.[11] It is impossible to estimate the pathological significance of such abnormalities by roentgenographic studies alone, and radiolucent areas often disappear spontaneously if left alone.[12] *3.* The results of inoculation experiments with organisms isolated from infected teeth are all sharply in contradiction to Rosenow's experiments, and these views on elective localization, which form such a cornerstone for the focal infection theory should not only be disregarded but actively contradicted.[13] *4.* The reports of clinical improvement following extraction of teeth must be accepted guardedly. The improvement may be due to the shock reaction following extraction, and is often temporary. The actual evidence is against extraction of the so-called infected teeth benefiting arthritis. Thus Cecil[14] reported fifty-two arthritic patients with all teeth removed, forty-seven receiving no benefit from this dental assault, while three were made worse. Further, Reimann quotes Bauer's experience in a series of 300 arthritic patients, those with their teeth left alone doing better than those subjected to oral surgery. The existing clinical evidence does not indicate any causal relationship of infected teeth to either nephritis or rheumatic heart disease.[15] *5.* Far from being of benefit to the patient, the extraction of teeth may be positively dangerous, the bacteria being actually forced into the blood stream by the trauma of operation. Okell and Elliott's[16] bacteriological study of the circulating blood immediately after the extraction of teeth revealed streptococcus viridans in 75 per cent of such blood cultures. It is true, however, that such transient bacillemias are usually harmless. Further, lung abscesses may follow the extraction of teeth, due to the aspiration of infected blood or tissue particles, 12 per cent of a series of 227 lung abscesses being due to this cause.[17]

The evidence against the tonsils being related to such diseases as rheumatic fever, rheumatoid arthritis, colds, subacute bacterial endocarditis, nephritis, and a host of other conditions charged to their account is even more unconvincing. Barring repeated attacks of tonsillitis, or peritonsillar abscesses, for which, of course, tonsillectomy is indicated, there is no definite standard to judge whether or not tonsils are chronically infected. In a series of scholarly articles, in which he stressed the impossibility of sterilizing the mucous membranes of the throat, Bloomfield[18] emphasized the fact that bacteria normally grew not only on the mucous membranes but in their superficial layers, in the crevices between the epithelium and in the orifices of the small mucous glands. Long[19] studied 2,000 pairs of extirpated tonsils and rarely found abscesses. The streptococcus viridans, to which so much importance is attached by the advocates of focal infection, is a part of the normal bacterial flora in the mouths of healthy individuals.[20]

Although there are apparently many instances in which acute rheumatic fever follows an attack of acute tonsillitis, various clinical studies indicate that in from 25 to 90 per cent of cases of rheumatic fever there are preceding conditions other than tonsillitis or respiratory tract infections, and that in spite of the wholesale removal of tonsils over the past three decades the incidence of acute rheumatic fever is not lessened.[21] There have been numerous comparisons of the incidence of rheumatic fever and cardiac disease in children with their tonsils removed and those with their tonsils unremoved. There is no significant reduction in initial infection, recurrence or subsequent heart disease in the children who have had their tonsils removed,[22] and the num-

ber of recurrences of rheumatic fever has not been reduced by tonsillectomy.[23]

Rheumatoid arthritis appears to be no more affected by tonsillectomy than is acute rheumatic fever. Statistical studies show that regardless of the type of treatment used in rheumatoid arthritis, 25 per cent "recover", 50 per cent improve, and 25 per cent get worse. Pemberton's[24] study of 400 cases, in which he showed 46 per cent recovered without operative attack on the supposed foci of infection, while only 16 per cent recovered after operation, therefore does not lend much support to the advocates of tonsillectomy. Likewise, it was pointed out that children with rheumatoid arthritis rarely show other evidence of localized infection.

Further statistical evidence of the apparent harmlessness of the tonsils in children was presented in the study of Cunningham,[25] who in 14,000 students found no greater cardiac change in those with either normal or diseased tonsils, and those with their tonsils removed; of a British Commission[26] which investigated 30,000 school children, and found the incidence of colds, coughs, and sore throats did not differ in those with and without their tonsils; and of Ellis and Russell,[27] who studied 4,000 Basque refugee children from the Spanish War, of whom less than 2 per cent had their tonsils removed, and even among those with their tonsils as large as walnuts, found an incidence of cervical adenitis and otorrhea of only 0.4 per cent.

Finally, to illustrate how far the pendulum has swung away from the idea of focal infection from the teeth and tonsils, and their removal as a therapeutic procedure, may be cited the changed position of such a careful student as Cecil. In 1933[28] he wrote, "the keystone of the modern treatment of rheumatoid arthritis is the elimination of infected foci." In 1938, after prolonged study, in collaboration with Angevine,[14] he stated that in no instance was the course of the disease altered or the patient cured when supposed foci were removed. He now believes that focal infection plays a relatively unimportant role in the disease. Bloomfield, who always found great difficulty in assimilating the tenets of the focal infection doctrine,[29] regards the procedures of extraction of teeth and extirpation of the tonsils as a gesture or the remnant of a habit which enables one to do something in chronic cases in which there is actually so little to do.

Summing up the case for the opponents of the theory of focal infection, Reimann and Havens freely concede that teeth should be removed or treated when there is reasonable certainty there is infection or apical abscess and tonsils which are the site of repeated attacks of illness, should be removed. However, they maintain that the theory of focal infection has not been proven, that the infectious agents are unknown, that large groups of persons with tonsils present are no worse off than similar groups with their tonsils removed, that patients who have given up their teeth and tonsils in the hope of alleviating some systemic disease have often, if not usually, made the sacrifice in vain, that when beneficial effects are observed they can seldom be ascribed to the surgical procedure, that the rare beneficial effects are outweighed by the harmful effects, or no effect at all, and finally that many supposed primary foci of infection heal spontaneously after recovery from the systemic disease, or when the general health is improved by hygienic or dietary measures.

Thus today stands the case of focal infection. It is probably a conservative statement to say that before an audience of bacteriologists, pathologists and internists, the doctrine of focal infection stands on a shaky pedestal and clad in somewhat dilapidated raiment. Among ophthalmologists, however, the case is somewhat different. It is a matter of established routine in almost all American ophthalmological clinics, to make a search for foci of infection in the study of the etiology of uveal tract disease, and usually to recommend the removal of discovered foci, as far as possible, as a therapeutic procedure in the treatment. So far has this idea been ingrained that even before routine cataract or glaucoma operations on non-inflamed eyes, the removal of obviously infected teeth or tonsils has been advocated as a precautionary measure calculated to lessen the incidence of post-operative complications, the theory being that the trauma of operation may favor the localization in the eye of bacteria from a remote primary focus. True, here and there voices have been raised among thoughtful ophthalmologists questioning the blind acceptance of the theory of focal infection, and Verhoeff along such lines has stated, "Belief in focal infection must be taken like religion, on faith". In recent years the realization that many cases of uveal tract disease, which might formerly have been believed due to foci of infection, are in reality due to tuberculosis or other in-

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fectious granulomata, has somewhat lessened the percentage of cases attributed to focal infection. Nevertheless, the doctrine of focal infection, correctly or incorrectly, occupies a strongly entrenched position in ophthalmology, and it should not be relegated to the unimportant status it enjoys among bacteriologists and internists, until the specific evidence for and against it has been carefully examined.

The ophthalmological literature bristles with reports, too numerous to list, of the dramatic recovery of patients with iritis, choroiditis, uveitis, and even optic neuritis of one type or another, following the removal of foci of infection, usually in the teeth, tonsils, or accessory nasal sinuses. In these patients there was present no other demonstrable systemic disease such as syphilis, tuberculosis, etc. In the cases of optic neuritis there was likewise no evidence of disseminated sclerosis or other conditions to which the ocular disease might be attributed. There can be no doubt of the accuracy of these observations for they have been a matter of common observation in the practice of the majority of ophthalmologists. However, it is also true that many cases of iritis and choroiditis of undetermined etiology recover spontaneously. It is likewise true that optic nerve disturbances occur often in disseminated sclerosis as the first evidences of the disease, and retrobulbar neuritis may subside and the patients enjoy long remissions before recurrences in the optic nerve and elsewhere reveal the true nature of the disorder. The healing of an eye lesion following removal of a remote infected focus can therefore be accepted only as suggestive evidence of a relationship between the ocular lesions and the infected focus. Nevertheless, this mass of clinical evidence, consisting of careful studies on the etiology of uveal tract disease and case reports illustrating the recovery of the diseased eye on removal of foci of infection, is so formidable that it is difficult to dismiss it lightly on the sole grounds that it is only suggestive evidence. It is necessary, therefore, in analyzing the theory of focal infection as it relates to ophthalmology, to examine carefully the clinical, experimental, bacteriological, and immunological evidence which may argue for or against this theory.

Many of the reports on the relationship of uveal tract disease to focal infection emphasize some special etiological factor. The following are typical examples. Benedict[30] reported fourteen cases believed to be caused by infections in the female pelvis, the usual organism being a green streptococcus. Kapuscinski[31] reported fifty-one cases of iridocyclitis caused by infections about the teeth, and healing after extraction of the diseased teeth. Mazal[32] reported cases due to infected teeth, sinusitis, and appendicitis. Zanettin[33] compared the incidence of the occurrence of foci of infection in non-infectious, inflammatory ocular diseases. In eighty-seven patients in the first category he found only 16 per cent incidence of foci of infection; in twenty-six patients in the second group, 57 per cent had infected tonsils; and in sixteen patients the organisms were cultured from the primary focus and in sixteen instances the organisms were found to be oculotrophic on animal inoculation. Wulkow[34] reported twenty-two cases of ocular disease of unclear etiology, of which thirteen healed and nine were improved after the extraction of infected teeth. Johansson[35] believed a latent phlebitis might often be the cause of iridocyclitis. Kuchler[36] emphasized the relationship between iritis and infected teeth. Havlik[37] studied 2,458 cases of routine tonsillectomy and found eye complications, chiefly iridocyclitis, in seven patients, in four of whom the condition cleared after the tonsillectomy. The importance of focal infection as a cause for optic neuritis and retrobulbar neuritis was emphasized by Trumbo[38] and Kapuscinski,[31] who reported twenty-seven such cases due to infected teeth, by Duggan and Chitnis[39] and by many others. These are all fair samples of the innumerable reports emphasizing the relationship between ocular disease and foci of infection. An especially interesting study was made by Enroth,[40] who studied the influence of the weather on ocular disease apparently due to foci of infection, and found that a great number of the cases of iritis occurred when there was a sharp climatic change, a finding in line with Billings' earlier idea that exposure to cold influenced the capillaries and predisposed to the outbreak of secondary infections.

The majority of the reports, as exemplified by those just cited, are open to the criticisms: 1. They do not give the complete material from which the cases reported are drawn. 2. They emphasize some one factor believed to be of importance, and do not give a comprehensive picture of possible etiology. 3. They do not allow deductions as to the relative importance of focal infection as compared to other possible etiological factors.

There are, however, several reports which meet these criticisms, four of which may be reviewed here because they illustrate the gradually changing opinion on the relative importance of tuberculosis and focal infection in ophthalmology. The first two of these are by Irons and Brown[41] and appeared in 1916 and 1923, in the early flush and full popularity of the focal infection theory. These reports have been widely quoted and have greatly influenced ophthalmological thought.

These studies each reported 100 cases of iritis studied completely, according to the ideas then prevalent, in the effort to determine the causes of the ocular inflammation. The results of these two studies are summarized in Table I.

TABLE I
SUMMARY OF IRONS AND BROWN'S STUDIES ON ETIOLOGY OF IRITIS, 1916 AND 1923

	Syphilis with or without focal infection	Tbc.	Focal Infections						
			Teeth	Tonsils	Gonococcal Infections	Sinuses	Other Infections	Combined Infections	Undetermined
1916	23	8	18	16	9	3	5	17	1
1923	15	0	9	37	1	1	4	24	9
TOTAL	38	8	27	53	10	4	9	41	10
Percentage	19%	4%	13.5%	26.5%	5%	2%	4.5%	20.5%	5%
			Total due to focal infection 144 cases, or 72%						

Thus in 200 cases of iritis, 19 per cent could be attributed to syphilis, 4 per cent to tuberculosis, 72 per cent to focal infection, while in 5 per cent the cause was undetermined. The low incidence of syphilis was undoubtedly due to the relatively high social stratum of the patients studied. The small number of cases attributed to tuberculosis is an accurate reflection of the then prevailing thought in America on the unimportance of tuberculosis as an etiological factor in uveal disease. Only outspoken cases of tuberculous iritis with evidences of active systemic tuberculosis were accounted as tuberculous. The outstanding feature of these studies is that 72 per cent of the 200 cases were definitely diagnosed as due to remote foci of infection, and in only 5 per cent was the cause of the iritis undetermined. A further follow-up study on 50 of these cases was reported by Irons and Brown in 1926.[42] Twenty-three of their patients had previous attacks of iritis, and twenty-seven had their first attack at the time they were first seen. Forty-three of these fifty patients had complete freedom from iritis for periods of from three to twelve years. In thirty-eight of these non-recurring patients, the original iritis had been attributed to foci of infection, which had been eradicated, in the other fourteen due to syphilis and tuberculosis, treated with anti-syphilitic therapy or tuberculin. In seven cases in which the iritis recurred, one was probably tuberculous, two were due to old gonococcal infection with arthritis, one to syphilis, two to foci of infection which had not been removed, while in the seventh case the cause was undetermined. It is scarcely a matter of wonder that this impressive evidence, from such careful students as Irons and Brown had the tremendous influence it did in ophthalmological thought.

The third report is by Irons in 1931.[43] In this paper he suggests there may be relative differences in the etiology of acute, recurrent, and chronic iritis. He defines chronic iritis as one of over three months' duration. He reports a small, carefully studied series of cases, in which 56 per cent of 26 cases showed evidence of tuberculosis, 15 per cent being probably due to tuberculosis.

The fourth report is from the Johns Hopkins Hospital[44] and is a survey of 562 patients with endogenous iritis or uveitis studied in the wards of the Wilmer Institute from 1926 to July 1, 1939, for the etiology of the ocular disease. Patients with uveitis admitted for some special diagnostic procedure and on whom the records were incomplete are not included. The material therefore consists of

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patients in whom the uveal disease was so severe that hospital care was indicated, or who were admitted to the hospital, primarily for diagnostic study. The material may therefore be colored in that the uveal disease was more severe than the usual "run-of-the-mine" iritis or uveitis, and that it may include a number of suspected cases of tuberculosis uveitis referred for the reason ocular tuberculosis has been a subject of especial study in the Wilmer Institute. In all of these patients the diagnostic study comprised a complete history, general physical examination, clinical and radiologic examination of the teeth, nose and throat, gynecological or genito-urinary examination, routine laboratory examination of the blood and urine, Wassermann reactions and Mantoux intracutaneous tuberculin reactions. Roentgenological examinations of the gastro-intestinal tract and gall-bladder, bacteriological studies and such special tests as the Frei test were made when indicated. Roentgenographs of the chest were made in many instances prior to 1935 and routinely from 1935 to the end of the study. In the latter years gonococcus complement fixation reactions on the blood serum were routine. Serologic studies for Brucella infection and biopsy of lymph glands for sarcoid were not routine until 1939. This study is therefore of no value in reflecting the etiological importance of these diseases.

The patients in the study were divided into two groups. The first group consisted of 244 patients in whom the results of the diagnostic study and the therapeutic response to treatment were so clear that a definite diagnosis of the etiological factor responsible for the ocular disease appeared justified. These patients are shown in Table II. In 45, or 18.4 per cent, the uveal inflammation was due to syphilis; in 132, or 54.1 per cent, to tuberculosis; in 31, or 12.7 per cent, to foci of infection; in 10, or 4.1 per cent, to gonococcus infection; in 14, or 5.7 per cent, to acute systemic disease, and in 12, or 4.9 per cent, to miscellaneous conditions such as herpes, sarcoid, etc. The patients in which the uveitis were attributed to foci of infection had either apically infected teeth, infected tonsils, infection of the accessory nasal sinuses, or chronic non-specific infections in the genito-urinary tract. In these patients there appeared a causal relationship between the foci of infection and the ocular disease, and the therapeutic response to the eradication of the focus of infection seemed such as to justify this assumption.

The second group consisted of 318 patients in whom the diagnostic study revealed no evident clear-cut etiological factors to which the uveal inflammation could be attributed, and in whom only a presumptive diagnosis, therefore, appeared justified. Fourteen, or 4.4 per cent, of these patients had syphilis, but the occurrence and character of the uveal disease did not altogether fit in with the usual picture of ocular syphilis. In 147, or 46.2 per cent, the ocular inflammation was believed to be tuberculous in origin, but in these patients there was insufficient evidence to make other than a presumptive diagnosis. One hundred and sixteen patients, 36.5 per cent of this group, had definite foci of infection but in none of them was there any evidence the focus of infection was causally related to the ocular inflammation. In the greater number the foci of infection were operated and eradicated on account of the local condition, and in hopes such eradication might improve the general resistance and local eye disease of the patient. In none was the result sufficiently striking to suggest a relationship between the focus of infection and the uveal tract inflammation. These 116 patients may have been examples of a latent ocular tuberculosis, of obscure etiological factors that defied detection, or possibly examples of uveal disease secondary to foci of infection, but so firmly established that eradication of the foci was without effect on the ocular picture. In 16, or 5 per cent, there was some evi-

TABLE II (GUYTON AND WOODS)
ANALYSIS OF 244 CASES OF UVEITIS, WITH DEFINITE DIAGNOSIS OF ETIOLOGICAL FACTOR RESPONSIBLE

	Syphilis	Tuberculosis	Foci of Infection	Gonorrhea	Non-Granulomatous Systemic Disease	Miscellaneous, Herpes, Brucellosis, Sarcoid, etc.
Number of Cases	45	132	31	10	14	12
Percentage	18.4	54.1	12.7	4.1	5.7	4.9

TABLE III
ANALYSIS OF 318 CASES OF UVEITIS, WHERE ONLY PRESUMPTIVE DIAGNOSIS COULD BE MADE

	Syphilis	Tuberculosis	Foci of Infection	Gonorrhea	Non-Granulomatous Systemic Disease	Miscellaneous, Herpes, Brucellosis, Sarcoid, etc.
Number of Cases	14	147	116	16	19	6
Percentage	4.4%	46.2%	36.5%	5%	6.0%	1.9%

dence that gonorrhea might be the cause of the ocular disease, but the evidence was inconclusive. In the remaining 25 patients, 8 per cent of the entire group, there was no cause found to which the uveal inflammation could be attributed, and it was assumed that either the original cause had been some systemic infection which had passed and left the ocular disease as its only residuum, or that the actual cause was so obscure it lay beyond the ability of modern medical diagnostic procedures to detect it. The composite figures for both groups are shown in Table IV.

and foci of infection as causes of uveal disease, and the decline of the implicit belief in the doctrine of focal infection.

There is a moderate amount of experimental work dealing with the relationship of ocular disease and focal infection. Zanettin[45] cultured bacteria from supposed foci in the tonsils, teeth, or genito-urinary tracts in 19 patients with iritis and inoculated a large series of rabbits intravenously with these organisms. In 64 per cent of the inoculated animals a violent congestion of the iris occurred, the same phenomenon persisting in the second transfer.

TABLE IV
ANALYSIS OF 562 CASES OF UVEITIS, DEFINITE AND PRESUMPTIVE DIAGNOSIS OF ETIOLOGY

	Syphilis	Tuberculosis	Foci of Infection	Gonorrhea	Non-Granulomatous Systemic Disease	Miscellaneous
Number of Cases	59	279	147	26	33	18
Percentage	10.5%	49.7%	26.1%	4.6%	5.9%	3.2%

A summary of these four papers on the etiology of uveal disease is shown in Table V. The difference in importance attributed to focal infection and tuberculosis is striking. It is certainly more than can be explained either on the basis of the greater chronicity of the cases of uveitis, the differences in the material studied, the changes or amplification in diagnostic study between 1916 and 1940, the individual interpretation of different observers or the correlation of clinical-pathological material. It illustrates the change of opinion in the course of two decades on the relative importance of tuberculosis

Traut[46] cultured pleomorphic streptococci from the circulating blood of five patients with acute iritis, thus demonstrating a bacteremia might occur in the acute stages of the disease. Berens and his co-workers have published a series of studies dealing with the relationship of ocular disease to foci of infection. In the first report[47] they described studies indicating that a high agglutinin titer to an autogenous strain of streptococci cultivated from a focus of infection was strong presumptive evidence that the strain was related to ocular disease. In a second experiment[48] they injected rabbits intravenously with organisms

TABLE V
SUMMARY OF THE STUDIES OF IRONS AND BROWN, IRONS AND GUYTON AND WOODS, ON THE ETIOLOGY OF UVEAL DISEASE

Report	Syphilis	Tuberculosis	Focal Infection	Gonorrhea	Non-Granulomatous Systemic Disease	Miscellaneous and Undetermined
Irons & Brown 1916 and 1923	19%	4%	72%	—	—	5%
Irons 1931	8.9% (?)	15-56%	24-64%	—	—	—
Guyton and Woods 1940	10.5%	49.7%	26.1%	4.6%	5.9%	3.2%

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isolated from the teeth and tonsils of patients with inflammatory ocular disease, and obtained an iritis in 44 per cent of 61 different strains, while in a control group of 69 stock strains of organisms, iritis occurred in only 29 per cent of the inoculated animals. In a third paper[49] they studied the ocular lesions resulting from single and multiple injections of various organisms, and found that iritis and microscopic lesions of the uveal tract might occur following the injection of relatively small doses of these organisms, especially of streptococci. Multiple doses were more efficacious than single doses. Few eye lesions, however, resulted from artificially implanted foci of infection, and there was no higher incidence of iritis in animals with a concurrent arthritis than in those with no demonstrable involvement of the joints. Chojnacki[50] isolated streptococci cultured from apical abscess in ten cases of iritis and four cases of axial optic neuritis, and inoculated these streptococci intravenously in rabbits. Twenty-four of thirty-eight such experimental rabbits developed ocular inflammation. Other experimental studies on the direct relation of foci of infection to inflammatory ocular disease are along these same lines, dealing in the main with the elective affinity of organisms isolated from the primary foci for the eyes, and the experimental production of ocular lesions in animals by the intravenous injection of such organisms.

It is obvious that while there is clinical and experimental evidence supporting the hypothesis that ocular disease may be caused by bacteria carried to the eye from remote foci of infection, such evidence is largely suggestive and circumstantial. It consists, first, in the indisputable fact that many cases of ocular disease are encountered in which there is no demonstrable systemic cause other than the presence of remote foci of infection; second, there are countless instances in which dramatic and prompt healing of the ocular disease has followed eradication of the primary focus; third, sudden transient exacerbations are occasionally observed after extraction of teeth or removal of tonsils and it is argued that these indicate a relationship between ocular disease and the focus of infection; fourth, there is some evidence that blood stream infection may be present in the early stages of the ocular disease; fifth, in experimental animals an iritis may be produced by the intravenous injection of organisms, especially streptococci; and, finally, there is some far-from-convincing evidence that some organisms may have a special predilection for ocular tissue.

Against each of these points, however, grave objection may be raised. Against the first point, that many cases of uveal disease are encountered for which no systemic cause can be found other than foci of infection, may be advanced the following fact: Foci of infection are present in many otherwise healthy people, and despite various reports to the contrary, they do not appear more frequently in patients with uveitis than in patients without uveitis. Hughes[51] studied the incidence of dental infection and sinus infection in a series of patients, most of whom had uncomplicated cataracts and none of whom had any evidence of uveal disease. This study was made at the Wilmer Institute under exactly the same conditions which governed the study made by Guyton and Woods in patients with uveitis. Guyton and Woods correlated these figures statistically to conform with the age distribution in decades for the patients with uveitis and compared the incidence of such foci of infection in the two groups. This comparison is shown in Table VI.

TABLE VI

INCIDENCE OF FOCI OF INFECTION IN 523 PATIENTS WITH UVEITIS AND 507 CATARACT PATIENTS WITHOUT UVEITIS (CORRECTED STATISTICALLY TO CONFORM WITH AGE DISTRIBUTION BY DECADES)

Type of Patient	No. of Patients	Foci of Infection	
		Dental Infection	Sinus Infection
Patients with uveitis	523	27.1%	12.4%
Patients with cataract	507	25.8%	13.0%

Thus in the 523 patients with uveitis the incidence of dental infections and sinus infections were respectively 21.1 per cent and 12.4 per cent and in the 507 patients with cataract the incidences were 25.8 per cent and 13 per cent. On the basis of these figures it is manifestly absurd to advance the argument that the mere finding of dental and upper respiratory tract infection in patients with uveitis is evidence of a causal relationship between the two. The fact that no other etiological factor can be found is at best only negative evidence.

In recent years American ophthalmologists have realized more and more the importance of tuberculosis and brucellosis as causes of ocular disease, and the difficulty in reaching an accurate diagnosis

in either of these is well known. Many of the cases of uveal disease formerly attributed to focal infection are probably instances of ocular tuberculosis, and the presence of infected tonsils, sinusitis, or periapically infected teeth only incidental and inconsequential findings. The following case history is typically in point.

M. L., age 34. Examined March 3, 1930. Inactive uveitis of right eye and phthisis bulbi of left eye. History of bilateral uveitis two years previously. Survey disclosed latent syphilis, chronic sinusitis, chronic tonsillitis, carious teeth with gingivitis, bronchitis, sub-acute pelvic inflammatory disease. Radiograph of chest showed non-tuberculous infiltration of lungs. Sensitive only to 0.1 mgm. of tuberculin. On May 25, 1932, left eye was removed as a lost sightless eye. Histological examination showed classical picture of tuberculous cyclitis.

Second, the argument that dramatic cures so often follow eradication of the foci of infection may be countered by the argument that such spontaneous cures frequently occur if nothing is done, and likewise in a great number of instances removal of all possible foci of infection leaves the unfortunate patient no better off as concerns his eyes than he was in the beginning. Stripped of tonsils and teeth, often the victim of colonic irrigations, abdominal and genito-urinary operations, the patient may finally be reduced to only those organs necessary for existence, while all the time his ocular disease progressed remorsely to blindness. That the incidence or recovery or improvement in ocular disease after eradication of foci of infection is not that indicated in many enthusiastic reports is evidenced from the report of Mata.[52] In a series of carefully studied inflammatory eye diseases believed due to dental infection, he found that extraction of the infected teeth and cleaning up of the oral infection resulted in healing of the eyes in 12.5 per cent. Further, the improvement in ocular lesions after eradication of the focus of infection may be relief from absorption of non-specific material from the infected focus and this improvement may be only temporary. Thus von Hofe[53] reported thirteen cases of inflammatory ocular disease, all of which cleared on removal of infected tonsils, or the cleaning up of oral sepsis. In ten of these, however, the improvement was only temporary, the eyes relapsing to their former condition. An essentially similar finding was reported by Guyton and Woods. In their series of patients in whom the uveitis appeared causally related to foci of infection, the foci were totally removed in 42 patients, partially removed in 11 patients and not removed at all in 21 patients. The incidence of recurrences in the three groups, over a period of observation from 3.8 to 4.2 years were respectively 33, 36 and 29 per cent. As early as 1933 Lourie,[54] after reviewing the evidence to date, concluded that

TABLE VII
EFFECT OF REMOVAL OF FOCI OF INFECTION ON RECURRENCES OF UVEITIS

Treatment of Foci of Infection	No. of Patients	Average period followed, years	Previous Attacks	Recurrences
Totally removed	42	4.5	55%	33%
Partially removed	11	3.8	73%	36%
Not removed	21	4.2	67%	29%

neither the present state of scientific knowledge or clinical observations justified the operative removal of the suspected foci for the purpose of alleviating ocular infections.

Third, the exacerbations of the ocular disease occasionally observed immediately following the eradication of a focus of infection are explained by advocates of the focal infection theory on the grounds of an activation of the eye lesion by the transient bacillemia which so often follows operative interference on an infected focus. This is, of course, possible, but it cannot be proven. It may be better explained either as a simple Swartzman phenomenon, the lighting up of an inflammatory focus through absorption of non-specific protein, or on the basis of allergic shock to specifically sensitized tissue.

Fourth, the finding of a transient bacillemia in the early stages of an inflammatory uveal disease, while it does occur, is an extremely infrequent occurrence, and Kolmer[55] has emphasized how rare positive cultures are obtained in the blood stream and the aqueous in cases of acute iritis, and, further, that the transient bacteremias which occur in infection of the teeth, tonsils and other structures, are quickly controlled by the bacteriostatic action of the blood. Further, it is remarkable, when one considers the large number of cases of streptococcus and staphylococcus septicemia, that secondary infection of the uveal tract so seldom occurs.

Fifth, while it is well known that iritis and uveal

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tract infections may follow the intravenous injection of bacteria in animals, the claim of selective affinity of certain strains of organisms for ocular tissue is so flimsy that it has no place in court. Every investigator who has injected animals intravenously with living bacteria is quite well aware that occasionally, sometimes frequently, metastatic lesions occur in the eye. Primarily these lesions are purulent or give the picture of an enophthalmitis, and only occasionally simulate or suggest the clinical lesions of the iris and uveal tract attributed to focal infection. While lesions do occur in the eye, they likewise occur with equal frequency in diverse organs, the liver, kidneys, spleen, etc. The figures cited to indicate oculotropism are totally unconvincing. It is, of course, conceded that bacteria do develop a certain environmental preference, but there is vastly more experimental evidence against oculotropism and the elective affinity of bacteria than there is for these suppositions. Thus Bellavia[56] injected rabbits with cultures of organisms obtained from foci of infection in patients with ocular disease. While he observed slight ocular changes of short duration, it was not possible to reproduce the ocular affection of the donors in the experimental rabbits. Giani[57] studied the localization of various organisms in both normal and traumatized eyes after intravenous inoculation. Peculiarly enough, he found the highest incidence of ocular localization occurred with B. prodigiosus and a comparative low incidence of localization with various streptococci. There was no difference in localization in the normal and untraumatized eyes. Cusumano[58] passed organisms, streptococci and staphylococci, from eye to eye of different series of experimental rabbits, in the hopes of developing an elective affinity of the organisms for ocular tissue. When these organisms were later injected intravenously, lesions occurred throughout the body, in the eye, liver, joints, kidneys, and spleen, a slight preference for the eye being shown by streptococci cultivated in brain broth. Nothing suggesting specific organotropism was found, his results being in disagreement with those of Rosenow and his followers.

Scientific proof that ocular disease of unclear etiology may be caused by bacterial metastasis from remote foci of infection, the crux of the focal infection theory, appears woefully absent and an impartial judge is forced to agree with Verhoeff that believers in such direct bacterial metastasis must base their belief on faith alone. There is, however, a strong possibility that foci of infection may be related to remote disease, not by direct bacterial metastasis but through sensitization and intoxication of the secondarily affected tissues by bacterial proteins, or secondary metastatic products absorbed from a primary focus. This possibility has been the subject of much interesting and productive investigation.

As early as 1902 Menzer[59] observed that immunity might play a very important part in the production of certain arthritic conditions. In 1916 Billings mentioned the possible part anaphylaxis, or allergy, might play in the production of secondary metastatic foci from the primary focus, but dismissed it as an idea for further investigation. In 1928 Holman expressed his belief that the fundamental basis of many rheumatic disturbances was a hypersensitiveness to various exciting causes and cited the work of Boots and Swift,[60] indicating the arthritis of serum sickness was clearly an allergic phenomenon, and of Turnbull,[61] which indicated that in the absence of foci of infection food hypersensitiveness might be responsible for certain cases of arthritis. As early as 1914 Fuchs and Meller[62] produced an experimental iritis in animals by intraocular sensitization of eyes with human serum and intoxication by intravenous injection thirty-five days later, thus proving an allergic iritis was a possible experimental entity. The evidence that secondary eye inflammation may be related to hypersensitivity from absorption of toxins or bacterial products from a focus of infection begins with the work of Swift and Derrick[63] in 1928. These authors found that by proper inoculation with streptococci a specific bacterial hypersensitivity, quite like the tuberculin hypersensitivity in tuberculosis, could be produced in experimental animals, and that the eye participated in this hypersensitivity. Later contact of the sensitized eye with the specific bacterial antigen produced an inflammatory reaction. The ocular hypersensitivity was best produced by an implanted agar focus kept infected with streptococci for many months. Studying the sensitivity thus produced they found a period of greatly increased sensitivity or hypergy, when there occurred a maximum tissue response to a minimum stimulus. This reaction was further studied by Derrick, Hitchcock and Swift,[64] and by Schultz and Swift,[65] who showed that this state of hypersensitivity might be produced either

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by an infected agar focus or repeated intracutaneous inoculations. Once produced it lasted at least up to the seventieth day, and there was no parallelism between the ocular and cutaneous sensitivity. Julianelle[66] studied the question, using pneumococci, and showed the nucleoprotein fraction of the bacterial body was responsible for this tissue hypersensitivity. Brown[67] varied this procedure somewhat by sensitizing the eyes by anterior chamber injection of various proteins, bacterial toxins, and killed bacteria. After a proper rest period the intravenous injection of the specific antigens to which the eye had been sensitized produced a serious iritis with pericorneal injection and dilatation of the iridic vessels. After the first attack quieted, repeated intravenous injection of the antigen produced further exacerbations, with exudates in the anterior chamber and posterior synechiae. Brown called attention to the fact that the clinical picture of the iritis thus produced by allergic methods closely resembled the type of recurrent serous or plastic iritis observed clinically, and was quite different from the purulent iritis, panophthalmitis, or endophthalmitis usually produced by the intravenous injection of living organisms.

These various experimental procedures employed to produce an allergic iritis are all open to the criticism that either at sensitization or intoxication there was some traumatism of the eye. However, in 1936, MacLean[68] succeeded in producing an iritis by sensitization of the eye through repeated intracutaneous inoculations of living organisms and intoxication by intravenous injection of the organism, a procedure which involved no traumatism of the eyes.

It is apparent that a quite reasonable experimental basis exists for the supposition that primary foci of infection may be related to secondary ocular inflammation through a mechanism of sensitization and intoxication from the primary focus. Indeed, if such an allergic basis is assumed it is not necessary to postulate that the primary source of sensitization and intoxication be a clinically infected focus of infection. It is quite within the realms of reason that all mucous membranes and even cutaneous surfaces, whether clinically infected or not, may act as potential portals of entry for bacteria into the blood stream. Clinical support of this theory, is, however, still lacking and the technical difficulties are so great that such evidence may be impossible to obtain. The chief of these difficulties is demonstrating a significant sensitivity to the products of ordinary pathogenic bacteria. Individuals are so constantly exposed to these organisms that more or less sensitivity is a routine finding. It is therefore impossible to attach much diagnostic significance to positive skin tests, or serologic reactions to common bacteria when autogenous organisms cultivated from a primary focus are used. It is likewise impossible at present to determine the local sensitivity of the diseased eye, which is, after all, the salient point. There is as yet no conclusive evidence that such findings as cutaneous reactivity or a high agglutinin titer against suspected organisms are of real diagnostic importance. All that can be said at this time is that experimental studies indicate such an allergic mechanism, for the production of ocular inflammation from a remote focus of infection is a possibility.

Should clinical ocular disease result from sensitization and intoxication of the eyes by material elaborated from a remote focus of infection, it would explain several of the clinical observations advanced as supporting evidence by the advocates of the focal infection theory. The clinical improvement which so often follows eradication of the suspected focus might be due to the removal of the source of intoxication. The exacerbations which occasionally follow the operative removal of the focus might be due to the sudden opening up of a large area for absorption of the responsible bacterial antigen. The exacerbations of the ocular disease which occasionally follow too large an injection of an autogenous vaccine might be a true focal reaction produced by an injection of antigen above the point of ocular reactivity. Not only would such an allergic mechanism explain the clinical observations which are supposed to indicate a relationship between ocular disease and a focus of infection, but it would also answer the various arguments against direct bacterial metastasis. Unfortunately, while there is a reasonable experimental basis for believing such a mechanism may exist, there is no proof of such in patients, nor does such proof appear likely to be immediately forthcoming.

Thus stands the theory of focal infection today as regards ophthalmology. It still remains one of the tenets of faith for many, if not the majority of American ophthalmologists. It must be candidly admitted that practically all the actual evidence in favor of the

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theory as originally set forth and generally subscribed to is totally clinical, largely suggestive and circumstantial. If this theory continues to be accepted and followed in the clinical practice of opthalmology, such acceptance and practice must be largely on faith. However, it is assumed that there may be a cause and effect relationship between a primary focus of infection and ocular disease through such a mechanism as sensitization and intoxication of the diseased eye by bacterial products absorbed from the focus of infection. A fair experimental basis can be advanced for such an assumption, although clinical evidence is lacking.

From the practical viewpoint the wisest course in the treatment and diagnosis of endogenous ocular disease is to continue the search for foci of infection. When such foci are found, if they are believed sufficiently severe or capable of impairing the general health of the patient, they should be removed either for their own sake or to improve the general health and resistance of the patient. If there is anything in the clinical picture to suggest a relationship of the diseased focus with the ocular inflammation, such as the outbreak of the ocular disease coincident with a lighting up of the primary focus, an undue sensitivity of the patient to organisms isolated from the primary focus, or a flare-up of the ocular inflammation after injection of a vaccine prepared from the primary focus, then operative eradication is indicated whether one believes the ocular disease is caused by direct bacterial metastasis, by sensitization and intoxication by bacterial products, or by absorption of toxins from the primary focus. However, the routine removal of minor and symptomless foci of infection as a cure-all for endogenous ocular disease has no place in modern ophthalmology.

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INFECTIONS OF THE HAND*

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Infections of the hand are common to both the medical men and the surgeons. So many of us are prone to treat lightly abrasions, scratches or puncture wounds of the finger and hand, but we should remember that Insurance Companies and Industrial Boards estimate that ten per cent of all permanent disabilities result from infections of the hand, and out of this ten per cent, fifty or sixty per cent are the result of what was thought to be trivial wounds. A large proportion of infections of the hand begin as needle pricks, splinters of wood, scratches, or puncture wounds, and if we could get the laity to go to their doctor immediately after receiving a minor wound, more serious complications could be prevented.

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Contributing factors to hand infections are:

1. Failure of the patient to report to the doctor immediately after injury. Minor accidents are frequently infected.

2. In Industrial Plants, too much dependence is put in the first aid outfit and the emergency man. Many of these cases should be sent immediately to the surgeon.

3. The fellow employee often removes a splinter or foreign body with a dirty knife. Remedies commonly used by fellow employees are such as—placing chewed tobacco in the wound, washing out the wound with water, then applying a dirty rag or piece of waste.

4. The anemic, under-nourished individual is more prone to get infections, and poor home facilities contribute to these infections. Packers, porters, restaurant workers, dish washers, stenographers, clerks and office workers are more prone to hand infections than outside workers, such as carpenters, masons, railroaders, etc.

Let us take the simpler conditions first, namely, bone felons, and paronychia. Bone felons nearly always involve the terminal phalanx. Diagnosis of a felon: Redness, pain, tenderness and swelling of the pulp of the distal phalanx. The end of the finger is bulbous due to edema. The swelling and pain are more pronounced than that found in simpler inflammation.

The treatment is immediate incision. Errors are often made by failure to distinguish between an early lymphangitis and a true localization of the distal phalanx. Remember that a bone felon is well localized. The second error is waiting for fluctuation. Destruction of the connecting tissue takes place if incision is delayed. In general, one may say that when there is present a painful, tender distal phalanx with excessive edema limited to the phalanx, incision should be made. This incision should be made on the lateral side, not in the mid line. Some prefer a circular, fish mouth incision around the end of the finger, which does give a perfect drainage, but this leaves a tender scar which interferes with function. If the terminal phalanx is entirely loose, it is best to remove this.

Paronychia, or run arounds, begin at one side of the nail as a simple infection, frequently from a hang nail or manicure. First there is a localized swelling the size of a wheat germ which is actually a sub-epithelial abscess. If this is opened early, immediate recovery takes place. If neglected, this infection spreads around the side of the nail completing the run around. It will invade the base of the nail sulcus. Chronic infection may ensue, and once this takes place, the chronic infection may last for several weeks.

Treatment is to incise along the outer side of the nail, never incise through the mid line, as in so doing, we interfere with the nail bed and overlying epithelium, which might permanently cause a split nail. It is well to reflect the overlying epithelium and pack so as to allow free drainage.

Another frequent infection that we encounter is what is known as the collar button abscess. The location is nearly always at the distal edge of the palm, under the dermal and epidermal tissues. In working men, the epithelium becomes markedly hypertrophied, making a dense sheet under which the pus spreads. An infection present under the dermis passes through this layer to the epidermal tissue, and a second abscess forms, thus providing a dumb-bell shaped accumulation of pus.

Treatment is early incision, and it is important to open into both pockets. Don't be content to stop when you strike pus. Always examine carefully by inspection with a probe for a second pocket. If pus has extended into the space in the web, make a drain by through and through incision from the palmar to the dorsal surface.

Infections of the hand usually fall under three classes, namely, lymphangitis, teno-synovitis, and infection involving the major fascial spaces. It is necessary that the surgeon differentiate between these conditions as they are treated differently.

We will first discuss lymphangitis. Lymphangitis may be superficial or deep. There is a rapid increase of the swelling of the entire hand and forearm, with the greatest tenderness and swelling and redness on the dorsum. Red lines of lymphatic infection may be seen running up the arm, elbow and axilla. There is absence of pain on extension of fingers or thumb. This is important to remember. The fingers can be moved voluntarily without pain. There is absence of tenderness over the tendon sheathes of the mid-palmar and thenar spaces. There is absence of bulging in the palm. The patient often presents great prostration.

The superficial lymphangitis lacks the great swelling of the hand. First, the patient gives the history of an abrasion or injury of the hand. With-

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in a short time he complains of headache, thirst, restlessness and fever. The lymphatics pursue the shortest course to the back of the hand. The lymphatics from the little and ring finger pass to the glands of the epitrochlea region at the elbow, those of the thumb and index finger course about the back and outerside of the forearm and wind their way to the axillary gland.

Treatment of lymphangitis is based on conservation and conservatism. The ill advised incision can do lots of harm. The position of masterful inactivity is most difficult to maintain, and yet the surgeon is constantly aware that his tendency to incise is due to his desire to do something rather than exact knowledge what to do. Therefore, we use local measures to wall off and overcome the infection. Until localization is present, use hot, moist dressings, rest and splinting of the hand and arm —and let me emphasize here, use voluminous dressing from the hand to the axilla. Do not stop at the elbow, even though the infection seems to be limited to the forearm. Carry the hot, moist dressings all the way to the axilla. No incision is to be made unless frank pus is present. It is well to start one of the sulfonamide drugs immediately because the streptococcus is more often the offending organism.

Teno-synovitis:—It is often difficult to differentiate between lymphangitis and teno-synovitis. More cardinal symptoms of teno-synovitis are as follows:

1. Exquisite tenderness over the course of the sheath and limited to the sheath—get this—limited to the sheath.

2. The finger nearly always assumes the position of flexion.

3. Marked pain on extending finger, most marked at the proximal end.

4. Symmetrical swelling of the entire finger.

The entire finger is uniformly swollen. The entire hand is slightly tender and the fingers are all slightly flexed. Extension may and often does extend along he sheath to the larger bursa and spaces. The most conspicuous and valuable sign in this diagnosis of teno-synovitis is the extension of marked tenderness of the area involved. It is well here to review the anatomy of these synovial sheaths of the finger. The synovial sheath of the index, middle, and ring finger begin just distal to the distal interphalangeal joints and extend into the palm, about one thumb's breadth proximal to the web, while that of the thumb and little finger extend the entire length of the hand, enlarging into a sac, and are known as the radial and ulna bursa respectively. These are often connected at the upper part of the hand, and this is an important surgical consideration. An infection of one might involve the other. The sheath of the thumb and little finger extends a thumb's breadth above the transverse carpal ligament at the wrist, so we can see that infections involving the little finger or the thumb have more potential danger than that of the index, middle or ring finger, and often infection will actually pass under the transverse carpal ligament at the wrist and involve the forearm.

The major fascial spaces of the hand: The three most important fascial spaces of the hand are the mid-palmar, thenar and hypothenar. The thenar and mid-palmar are by far the most important and most frequently involved. The infection of the sheath of the middle, ring and little fingers would involve the mid-palmar space, by simple extension, while the thenar space most likely becomes involved by extension along the sheath of the thumb and index finger. When the mid-palmar space is involved, we notice that a slight bulging of the palm is noticeable in spite of the palmar fascia. The swelling and exquisite tenderness is important; early before this swelling becomes marked, the tenderness is limited to the mid-palmar space. There is extension along the lumbrical canal so that swelling at the web of the fingers is prominent. The fingers are flexed. The relation of the swelling of the palm to that of the thenar area is of great surgical importance. With infection of the mid-palmar space, there is an associated swelling of the thenar space, but this is due to edema. When the thenar space is involved with pus, the swelling is out of all proportion to that of the palm if it is involved. The thenar space will look as if a balloon had been inserted and blown up to its full capacity. The thumb is pushed away from the hand. The edema of the back of the hand is always present and swelling is much greater than that of the palm, due to the loose tissue; however, the pus is always on the palmar side. Remember that edema gives rise to a soft pitting, while, if pus is present, induration can always be felt. If this point be remembered, embarrassing mistakes can be avoided. I want to emphasize this, that location of the greatest swelling does not indidcate the position of the pus. The

excessive swelling comes in the area where there is the largest amount of loose cellular tissue, namely, the dorsum of the hand. Almost always, the pus is on the palmar or flexor surface. Remember, too, that the point of tenderness is of marked importance in locating pus. The hypothenar space, the least important of the three, is separated from the remainder of the hand in that it is not involved secondarily to palmar infections. If the infection is in the mid-palmar space, pus may extend to the lumbrical canal, to the web, and possibly rupture into the thenar space. Abscesses involving the thenar space will ordinarily come to the surface on the dorsum, between the thumb and index finger, or may rupture into the mid-palmar space. An abscess involving the hypothenar space will ordinarily come to the surface upon the dorsum. Here again attention is called particularly to the rarity of abscesses upon the dorsum, even though the swelling is most marked in this area. An unnecessary incision is often made. In infections of the finger or the hand, it is very important to know the correct place to make the incision. In the fingers, the incision is best made on the lateral aspect, not in the midline, as this would leave a tender scar and would interfere with function. Make the incision adequate, too large rather than too small. If this infection has extended up the finger and involved the lumbrical spaces, carry the incision into the palm about one-fourth inch. Infection of the tendon sheath of the index finger usually passes to the lumbrical space on the outer side of the finger and may extend into the thenar space. If this be the case, carry the incision along the radial side of the metacarpal bone, the incision lying dorsal to the web, extending from the thumb to the base of the index finger. With infection involving the tendon sheath of the thumb on the flexor aspect, the surgeon should dissect down to the tendon and open the sheath and enlarge this incision into the dilated portion of the sheath, namely, the radial bursa in the thenar eminence. Do not confuse this with the involvment of the thenar space abscess, as the line of incision is different in that case. Remember, I am still speaking of involvement of tenosynovitis of the flexor surface of the thumb. This tendon is nearer the palm, while the mass of thenar muscles lies to the radial side of the incision. This incision is best carried to the lower border of the transverse carpal ligaments. Extension along the sheath of the little finger often extends to the dilated portion of the sheath which is known as the ulnar bursa. An incision here begins at the distal crease of the palm and extends to the radial side of the hypothenar eminence.

Let us consider the abscess involving the two main spaces of the hand, the mid-palmar and thenar space. The mid-palmar space—and keep in mind that this is most often involved by infection of the middle, ring and little finger—is best opened by making an incision along one of the lumbrical canals of the three fingers. Choose the canal already infected. The lumbrical canal of choice would be that between the middle and ring finger. Extend this incision one or one-half thumb's breadth into the palm.

For involvement into the thenar space, the incision is carried along the radial side of the index metacarpal, as pointed out above, being dorsal to the web, and with a small artery forceps one can thrust into the space. This incision leaves no tender scar on the palmar surface. Care should be exercised in not spreading the forceps beyond the middle of this metacarpal bone for fear that we would spread the infection to the mid-palmar space.

Post-operative care of infections of the hand: Immobilization of the hand is paramount. No surgeon would fail to immobilize a fractured leg or arm. Often one fails to remember that after an extensive injury to the soft part by trauma or infection, immobilization prevents pain and favors healing. If the finger is the only part that is involved, put this on a splint. If the hand is involved, put the entire hand on a splint. Put the hand to rest. It is ideal to put the hand up in a position of function while it is convalescing. If the hand is involved more than the finger, allow the fingers to have slight flexion and the hand extended in a cocked-up position. This is a position of rest.

Prophylactic treatment of injuries of the hand: Since a large portion of infections of the hand follow trivial injuries, for instance, if there should be a small puncture wound, or scratch, try to squeeze a drop of blood out of the wound and start hot applications. In traumatic wounds of the hand, soap and water should be used abundantly. Do not use a harsh antiseptic. A thorough debridement should be done. Shave the wound if there should be any hair about it. If the hand is greasy, use ether or

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benzine for cleansing. If for any reason the condition of the patient is such that a thorough debridement cannot be done, that is, if he should be in a severe state of shock, the paramount consideration is to prevent infection. If bones should be fractured, these are reduced, but no plates or screws or foreign material are used. Remove any loose bone fragments, but those having attachment to periosteum or muscle, replace as accurately as possible and leave them alone. Fill the wound with sulfathiazole powder or sulfanilamide as you prefer, the former being the one of choice, and close without drainage; however, the wound should be closed loosely.

In cases of infection of the hand, general anesthesia is to be preferred. This enables the surgeon to examine the pocket more thoroughly, and without pain. If this is attempted under local anesthesia, he not only causes a great deal of discomfort to the patient but takes a chance of spreading the infection. The common habit of pressing or squeezing wounds is to be condemned. If the incision is adequate, the pus will drain out. By using pressure, one is likely to spread the infection and squeeze pus into other spaces.

First, decide whether to treat the hand conservatively or by incision. Hasty and ill advised incisions may do serious harm. It is better to err on the conservative side if in doubt. Many lives have been lost because of surgical incision in lymphangitis or streptococcic cutaneous or subcutaneous infections. Be sure to differentiate between lymphangitis and streptococcic cutaneous infections of the hand, or whether you are dealing with a tendon sheath infection. Again, if you are in doubt, use voluminous hot, moist compresses. Incising a streptococcic cutaneous infection only tends to spread same, whereas delay in opening a tenden sheath, if it be involved, promotes necrosis of the tendon. One word of caution in using hot compresses to the hand: remember that an infected hand is less sensitive than a normal one and there is danger of a burn if we depend upon the patient to tell when the dressing is too hot.

Let me emphasize again the importance of looking upon every minor or trivial wound of the finger or hand as a serious one, in that it has serious potentialities. Failure to recognize the type of infection you are dealing with may permanently incapacitate the patient from earning a living, or even worse, it might cost him his life.

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THE WAR AND ITS EFFECT UPON THE MENTAL HEALTH OF THE ARMED FORCES*

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It is significant that your conference should give consideration to the problem of mental health and the armed forces at such an opportune time. I propose to discuss some of the implications of social work to the war situation.

SOCIAL WORKER—PAST, PRESENT AND FUTURE

The social work in this country is being carried on to a very large extent by women who are between the ages of twenty-five and fifty. The younger group are not so far removed from the first World War but what they are familiar with the effects of that catastrophe upon the social life of this country during the past twenty-five years, while the older group have dealt intimately with families and individuals whose maladjustments were caused either directly or indirectly by the war.

We have now just embarked upon another one of those social cataclysms, the like of which man has never before experienced and the results of which are beyond the ability of man to prophesy. Yet, there seems to be a deep-seated conviction in the minds of those who are not prone to indulging in hysterical fears, pathological pessimism, and incapacitating morbidity that the human ingenuity which created this pandemic of death and destruction will eventually be directed toward more constructive goals and the objective for which we are

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fighting, that is, a better organized world in which to live will be achieved.

INTELLIGENT EFFORT—MAXIMUM CONTRIBUTION

In the meantime, all of us who are engaged in the humanitarian professions and services, whether they be jobs involving great responsibility or the menial tasks of the humblest worker, must not only work, but work intelligently in order that our efforts may contribute their maximum to the common cause.

It is imperative that we profit insofar as it is possible from the experiences of the first World War. We cannot afford to repeat the many costly mistakes we made at that time nor should we fail to utilize such information as we acquired which had value.

NEUROSIS—THREE DIMENSIONS

The war neurosis is a three-dimensional problem. Its *length* can only be measured by time which extends from war to war. The casualties of the last war remain with us as a medical and social problem of gigantic proportions, and the effect of the present conflict is already bringing out evidences of nervous instability in the civilian population as well as in the armed forces. The *breadth* of the war casualties encompasses all the neurotic and psychopathic disabilities of civil life and may include practically every symptom in the whole category of medicine. *Height* can be appreciated if one studies the Annual Report of the Administrator of Veterans' Affairs. Here we find that 59 per cent of all patients being cared for in veterans' hospitals have neuropsychiatric disabilities, and while tuberculosis and general medical problems are declining, the neuropsychiatric cases are slowly increasing. The economic aspect of the problem is appalling when one considers the money spent on medical care, training, and compensation.

NEUROSIS RESISTANT TOWARD TREATMENT—THREE PHASES

The war neuroses begin early. They are long drawn out, difficult to treat, and tend to increase for at least a quarter of a century after the cessation of hostilities.

There are three definite points of attack on the war neuroses. First, in the selection of the men who are to enter military service; second, in helping maintain the morale and caring for the mental casualties during combat service; and, third, in aiding the soldier during the period of demobilization toward rehabilitation and readjustment to civil life.

The problem of the war neuroses might well be considered in the light of these three outstanding phases of the soldiers' military experience: (1) mobilization, (2) combat service, (3) demobilization.

The social worker is interested in all three of these phases of the soldier's career. Her most important contribution, however, must necessarily be made during the period when the army is being mobilized and later on when the soldiers will be called upon to make the adjustments to civil life luring and following demobilization. The question may well be asked in all seriousness which period presents the most complex and difficult problems in the soldier's experience—the transition from civilian life to that of a soldier, or the readjustments from military to civilian life?

Let us first consider some of the problems related to the job of mobilizing an army of several million men who must be physically and mentally fit for combat service.

The question of physical fitness of any given individual can be attacked directly and objectively. The physician is equipped with mechanical devices such as the stethoscope, ophthalmoscope, microscope, electrocardiogram, x-ray, laboratory apparatus, and a variety of techniques—all of which aid in determining whether or not the candidate for service falls within the normal range of physical fitness. Such problems as may arise to bother the physicians interested in this particular field are not our concern at the moment. Having rationalized the difficulties of eliminating the physically unfit from the army, let us turn for a moment to those handicaps and deficiencies, both actual and potential, that are fundamentally and predominantly mental in character. Here we have few instruments or mechanical devices which will aid us materially in making a decision as to the candidate's mental fitness for military service. We have relatively few of the standards which are recognized as guides in evaluating mental fitness. We are dependent to a very large degree upon our ability to interpret correctly from the mental examination, the history, and observation what we have a right to expect of the future behavior of the particular individual under observation.

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The available information upon which our judgment must depend comes from two sources: 1. Knowledge of the individual's personality makeup—his intellectual ability. The manner of man he appears to be. 2. What is the record of the individual's adjustment to civil life? Has he demonstrated his ability to successfully cope with the stresses of life to which he had been subjected up to the time of the examination and what has been the nature of his experience?

We may take it for granted that every soldier will be subject to about the same physical stresses and mental strains during his military career. He must be considered a potentially front-line soldier. There is abundant first-hand information gathered from the last War as to just what a military career calls for.

The Selective Service Boards have to assume for practical purposes that the candidate is mentally sound unless he shows some evidence of emotional instability or mental inadequacy during the rapid-fire six-to-eight-minute examination by the psychiatrist or the man himself gives a history of nervous instability, perhaps having been under treatment in a mental hospital or by a private physician, or other information is presented to the Board relative to the candidate's fitness for military service. Any or all of the foregoing opportunities for detecting the neurotic or psychotic individual can be, and are, frequently missed. The failure to exclude the epileptics, schizoids, paranoids, and psychopaths, has many hazardous implications, as it allows them to embark upon an experience which is scattered with the shoals upon which these psychologically inadequate individuals are bound to become wrecked.

One need only visit the psychiatric wards of the camp hospitals, the naval hospitals, or any of the medical centers which have the facilities for observation and care of neuropsychiatric patients to witness the clinical evidence of those who were unwisely selected cases for military service. *What is the Answer?*

The Selective Service Boards should have a record of every individual of military age who has had treatment in either a public or private institution and the private practitioner should be called upon to acquaint these boards with the names of such individuals which are known to him to be unfit for military service.

Every effort should be made by the Selective Service Boards to utilize the various civilian organizations in obtaining social histories on those individuals who show any evidence of nervous instability or when there is reason to believe there has been a mental illness of any type. (The organization and development of such a plan should be under the direction, of course, of trained social workers.)

For every case that shows evidence of any mental disturbance after being inducted into service, a social history should be obtained during the period of observation.

Could every candidate for military service have a preliminary or probationary period before being inducted into the army or navy with the right to an honorable discharge if found not suited for medical reasons for military duty, the government would save millions of dollars for medical care, rehabilitation, and compensation, and thousands of individuals would be salvaged for useful civilian life.

Inadequate Examinations
Short-Sighted Policy

It is rather difficult to reconcile the rather superficial neuropsychiatric examinations which the prospective soldiers are being given at the present time, limited to six or eight minutes for each man, with the importance of these neuropsychiatric casualties both from a military and from an economic point of view. Recently, it was stated that adequate psychiatric examinations which would weed out the potential neuropsychiatric disabilities from the army would save the Government one-half billion dollars for every one million draftees. The director of the Veterans' Affairs has stated that every psychotic individual that breaks down in the army costs the Government thirty thousand dollars from the time of the onset of his disease until his death. If psychiatrists can be hired at the rate of fifteen dollars a day, it takes but a little mathematical reckoning to determine that if one psychiatrist picked out one potential psychotic every six years, he would save the Government his salary. With the aid of an adequate social service staff and at very little additional expense to the Government, the psychiatric examinations, as carried out at the present time, could be made infinitely more valuable.

Notwithstanding the fact that during the period

of mobilization of World War I the psychiatrist examined approximately three and one-half million men and rejected nearly seventy thousand, there remained so many potentially neurotic individuals in the army that went overseas that General Perishing wired the Surgeon General in July, 1918, as follows: "Prevalence of mental disorders in replacement troops recently received suggests urgent importance of intensive efforts in eliminating mentally unfit from organizations of new draft prior to departure from the United States."

SOCIAL WORKERS' CONTRIBUTION

There is no doubt that had the Selective Service Boards been in a position to utilize to the fullest extent the services of the civilian social organizations that are scattered throughout the length and breadth of this country in obtaining a social history on even those cases that must have been looked upon with suspicion, hundreds of psychopaths and neurotics would have been rejected. There is an obvious need for the Selective Service Boards and the Army Induction Stations and the camp hospitals where men are being held in psychiatric wards for observation to have, as an integral part of their plan of investigation, the facilities that might be utilized through a well-organized social service set-up for contacting the various civilian agencies throughout the country that could furnish adequate social histories for the physicians who are responsible for passing on these cases. Such investigations would represent one of the most important contributions in the effort to determine the mental fitness of the man for the army and would be of invaluable assistance in weeding out those potentially unstable individuals who are likely to break down under the stresses and strains of army life. This should be the social worker's real contribution in this present-day crisis, a service for which she is eminently well trained and qualified to render and a responsibility which she should assume in order that the Government, community, and individual might profit before it is too late.

DEMOBLIZATION

What I have said about the period of mobilization and the social workers' contribution during this period is fairly obvious and generally accepted by those who are familiar with the neuropsychiatric problems of the last War. What I am about to say with reference to the period of demobilization is less well recognized and may be considered of merely academic interest, but I assure you there will be no problems with which this country will have to deal following the war that will cause us more concern or will be more significant to the welfare of the soldier than those that occur during the following demobilization.

Transition from Soldier to Civilian. The period of transition from military life back to that of the civilian is perhaps the most trying that many soldiers have to experience, whether the soldier be sick, well, or convalescing; this period of transition has its moments for most men that call for the same kind of courage and stamina as did the battle fields and other arenas of active service. This period is fraught with many disappointments and disillusionments. The glamour, glory, and excitement of the soldier's life with its continuous changes of scene and the comradeship of his fellow soldiers is no longer present. There is a dull emptiness to life and it becomes oppressive. There seems to be a sense of the futility of effort and to many nothing seems worthwhile. It is during this phase of readjustment that the soldier feels that he is the forgotten man. He is apt to become introspective and filled with self-pity and he is somewhat dismayed that he counts for so little. This is a state of mind which cannot be overlooked or treated lightly. It is the soil upon which so many of the chronic incapacities develop. Any plan of rehabilitation which involves the independence and the happiness, not only of the soldier, but also his family, cannot be taken too seriously. The wisdom, the foresight, and the efficiency with which the problems of this transition period are carried out must of necessity be reflected in the future stability of hundreds of men and families for years to come.

It is an extremely difficult task during this period of transition for us who are responsible for rehabilitating the soldier to strike a nice balance, to have a sympathetic understanding and a kindly consideration for the individual soldier on the one hand, and still not become unduly influenced by our sympathies so that we disregard fundamental and important factors relating to a successful social and economic rehabilitation of the individual. There is grave danger of jeopardizing any plan of rehabilitation by assuming an unduly sympathetic, over-solicitous, paternalistic attitude toward the patient. There already exists a tendency toward intro-

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spection, self-pity, with fears and anxieties which creates a distorted idea of the gravity of the situation which he is facing.

Our first and most important duty is to prevent the incapacitated soldier from becoming disgruntled. Every effort must be directed towards convincing him that the Government, medical officers, reconstruction and social workers are interested in his welfare. He must be impressed with the fact that this interest extends not only to himself but to those who are dependent upon him. Not only are we thinking of his present situation, but his future happiness and efficiency. He must not be allowed to entertain the idea that the object of his treatment and training is simply to save money for the Government. On the contrary, he should be helped to understand that his Government can make no greater contribution to his welfare than that of returning him to the community in a state of mental and physical fitness that will permit him to assume efficiently the responsibilities and obligations which he gave up on entering the service.

Consider for the moment the situation as it exists between the soldier and the public as he embarks upon his military career and at the time of his discharge from service. The public, press and the politicians are little concerned about the men who are rejected or accepted for military service. Already nearly a million of the two million men examined by the Selective Service Boards have failed to qualify for general military service, and except from those interested in the medical aspects of the problem, we hear little about it.

Occasionally a howl goes up when some important public figure, such as a baseball player, is deferred from active service or perhaps a politician's son eases his way out on some pretext or other, but, on the whole, the Selective Service Boards are permitted to carry on their work unhampered by political influence or public criticism. This is, of course, as it should be, but quite different, however, is the awakened public interest during the period of rehabilitation. The ex-soldier's medical treatment, training, and compensation are questions of vital importance to every selectman, county commissioner, state official, Congressman, or whoever else may get the ear of a Government official that might help out his particular constituent in getting whatever the politician thinks may be available, regardless of whether it is good or bad for the soldier. One might think from the interest which these influential gentlemen took during the last World War in getting compensation for their constituents (most of whom they knew nothing about personally) that they were making it a full-time job to see that each and every man who had any connection with the military service could retire for life on a pension.

Not only was the problem of rehabilitation in the true sense of the word interrupted and at times prevented by unwise and unjudicious measures relating to compensation by certain groups, but the same lack of wisdom prevailed after the last War in relation to pressures brought about by various groups in pressing claims for vocational training. It is not the vocational training to which one would object, but rather the idea of placing a large number of individuals in the type of training to which they are obviously unsuited, subjecting them to a vocational experience where failure was inevitable. There was a striking evidence of failure on the part of those in charge of this particular governmental activity to appreciate the gulf that lay between the individual's ambitions and his ability. Encouraging a man to take up some particular vocation because there happened to be an opportunity for training in that field was another mistake—failing to recognize certain fundamental inaptitudes on the part of the prospective trainee to successfully acquire skill in that particular field.

It cannot be said that the plan of vocational guidance and training as carried out after the first World War had much to recommend it. It was characterized by failure, disappointment, a waste of time, effort, and money, and all too frequently resulted in irreparable damage to the man himself.

Compensation, hospitalization, or training cannot restore the soldier to his pre-war usefulness unless we can instill in him what we may call the "will to recover," unless we can create within the individual himself a willingness to forego the benefits derived from the incapacity. The motivating force which operates in prolonging the incapacity is invariably quite unconscious to the patient. It is for this reason that it is difficult to deal with. It should be recognized by those in charge of the whole problem of rehabilitation that illness is frequently an escape from those life situations which we are not well adapted to meet. It represents a solution to the conflict between the desire on the part of the individual to live up

to certain fundamental standards which he has accepted for himself and which had become a part of his personality make-up on the one hand, and the urge to evade and avoid unpleasant responsibilities on the other. In accepting illness as a compromise, the individual preserves his own self-esteem and it is quite obvious that when these unconscious motivations become artificially weighted by such factors as compensation, it makes the medical restoration of the patient in many instances secondary. In other words, the task of facing the situation frankly, objectively, and from an intellectual point of view becomes extremely difficult. In brief, when men are paid for being ill and penalized for getting well, the physician has little to contribute. This does not mean that compensation as such does not have a just and useful part to play in the rehabilitation of the ex-soldier. It does imply, however, that it must be used with nice judgment and only after every other aspect of the whole problem of rehabilitation has been carefully studied and evaluated.

Hospitalization is, of course, essential in dealing with the frankly mentally sick individuals—the so-called psychotics—but I must mention in passing the lack of wisdom that was displayed during the last war in the hospitalization of hundreds of psychoneurotics which resulted in prolonging their period of invalidism, not only at the expense of the Government, but to the detriment of the patient. Except for a period for study and observation, the psychoneurotics should be treated in out-patient clinics where adequate psychotherapy and well-supervised social service can be provided, not only for the welfare of the patient, but for the family as well. This is the only rational method of restoring the mentally handicapped ex-soldier to a life of efficiency. Such are some of the problems which will be of vital concern to the psychiatrist and social worker at some future date and for which we should be prepared to make a contribution. There is a grave danger that this period of demobilization and rehabilitation may produce more neuropsychiatric casualties than the theatres of combat service.

One cannot leave a discussion of the mental health of the armed forces without saying a few words about the effect of the war upon the various members of the families of these men. The home will necessarily undergo many changes during the war period which will be of particular interest to the social worker and some of the threats and dislocations of the family life well may affect those in combat service.

For the first time, the American soldier will have reason to be concerned about those he has left behind and this will represent an anxiety which will have to be dealt with as an additional stress which will tend to increase the soldier's emotional instability.

Fathers and older brothers in many instances will be leaving home for service, turning over responsibilities to be taken on by the younger members of the family—both boys and girls. This will hasten the growing-up processes and the adolescent period, as we think of it in social and psychological terms, will be materially shortened. Children will be emancipating themselves from the emotional dependence upon their parents at a much earlier date, aided and abetted by the fact that many of the younger adolescents will also be establishing an economic independence which they never anticipated having at such an early age. Under such existing conditions, the adolescent will no longer find it necessary to ask parents for his allowance, ordinarily limited to fifty cents or a dollar a week. They will be cashing their own checks as a result of their employment in some industrial plant, and, consequently, they will be less disposed to report in and out, less willing to be guided and directed in their private affairs by parents. With these added responsibilities will come a demand for more privileges and greater freedom. It will not be easy for parents to make the adjustment to these independent emancipated youngsters. Under this new and somewhat trying social and economic situation, it will be the obligation of society to provide for civilian youth, particularly those employed in industry, safeguards from the highly commercialized degrading amusements that are already springing up to lure these unsophisticated spenders. We need something comparable to that which the U.S.O. is doing for the men in service for our youthful civilian population. We must keep in mind that the wives, sisters, daughters, and sons of the men in service are indeed worthy of every consideration which wise social planning can provide.

INCREASE IN JUVENILE DELINQUENCY

There is considerable evidence from the English reports as well as our own observation that juvenile

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delinquency is becoming more prevalent and it is a noticeable feature that a larger number of the more serious crimes are being committed by a younger group of offenders. It seems as though the 14-16 year old group of delinquents are carrying on with the anti-social activities that had previously been committed by those offenders a year or two older. When we take into consideration the fact that age 19 predominated in the frequency of arrests in 1941 and that the same year age 18 was second in frequency, it is with considerable trepidation that we anticipate the indirect effects of the war situation on delinquency.

I am sure that many of these social problems which cannot but affect indirectly the emotional stability of the men in service will be discussed by other speakers. I bring them up at this time only to point out the significance and the broad implications of some of the dislocations in our social and economic existence due to emergency situations which social workers should be called upon to deal with as time goes on.

However, I am not sufficiently well endowed with optimism to entertain any strong conviction that either the social workers or the psychiatrists will be sought out by those in authority in any large numbers either to contribute in the process of building up an army for active service or assisting in the return of that army to civilian life after hostilities subside, or to deal with the increasing number of social problems that will take place in civilian life; but we do know from past experience that the social worker will assume an important part in the final plans of rehabilitation. It matters not whether the social maladjustments be the result of physical damage brought about by combat service, psychological traumas, or upheavals in our social and economic way of life. To a very large extent the problem will be that of helping the individual to resume his place in society as happily and as efficiently as the residual incapacities will permit. It, therefore, behooves all of us to give these matters serious thought and consideration and, insofar as it is possible, to prepare a plan of action and outline certain procedures based upon our past experiences which will safeguard the future interests of the ex-service man.

The social worker has a real contribution to make to this present emergency situation—something that is vital and fundamental to the welfare of the soldier and the country. I have no misgivings as to her ability to measure up to the task with which she will be confronted and to carry on the high standards and traditions of her profession when the opportunity for service is presented.

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HYDATIDIFORM MOLE
A Report of Six Cases*

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Hydatidiform mole, also known as cystic degeneration of the chorion, vesicular mole, or myxometous chorion, is a cystic degeneration of the chorionic villi.

The etiology of hydatid mole is not known. Evidence seems to point to its being a true teratomatous phenomenon, the changes taking place in the embryonal envelope rather than in the embryo itself.

A true estimate of the frequency is impossible, because so many occur outside of hospitals and are either undiagnosed or not reported. It is generally conceded, from reviews of large series, that hydatid mole occurs approximately once in every 2,000 cases of pregnancy, and it is limited to the child bearing age. Color and race are not significant factors. Parity seems of no importance since mole occurs in primipara as well as in multipara. It occurs most frequently during the early months of pregnancy and is often associated with, or seen in, patients who have chronic nephritis.

There have been six cases of hydatidiform mole treated on the ward obstetrical service of the Medical College of Virginia Hospitals during a two-year period from July 1, 1939, to July 1, 1941. Three

*From the Obstetrical Department of the Medical College of Virginia Hospitals.

of these cases present some very interesting and unusual observations. The other three cases were all very similar in most respects. Only one of these last three cases will be presented since there was nothing unusual about any one of them.

The first case was of particular interest because it was a rare type of benign penetrating hydatid mole, with spontaneous rupture of the uterus at the site of penetration into the uterine wall. This case was also of interest because the uterus was not enlarged out of proportion to the period of amenorrhea, but, on the contrary, was smaller than expected for the period of amenorrhea.

It is interesting to note that both the first and second cases to be presented were at first admitted to the medical service because of a severe toxemia and cardiac decompensation, thought to be associated with a beriberi type of heart. The diagnosis of pregnancy was not considered at the time of admission. This error in admission diagnosis was noted in other cases reported in the literature, and should probably be kept in mind in all patients with these findings.

In the second case, the size of the uterus increased with remarkable rapidity during her first week in the hospital.

The third case was of interest from a diagnostic standpoint.

First Case: M. L., a 37-year-old married colored multipara, was admitted to the surgical service of St. Philip Hospital on April 27, 1939. She gave a history of having had an abortion five months prior to admission, and of having bled intermittently, in moderate amounts, since that time. She was dyspneic and orthopneic on admission, and the admission diagnosis was broncho-pneumonia and tubo-ovarian abscess.

Laboratory studies revealed red blood cells 2,300,000; hemoglobin 28 per cent (Sahli); and white blood cells, 5,900. Urinalysis was negative except for one plus albumin in a catheterized specimen.

The patient was transferred to the medical service because of the pneumonia. After a short period of observation, it was thought that the dyspnea was due to cardiac decompensation associated with a beriberi type of heart. There was a moderate amount of nitrogen retention. She was digitalized, transfused, and showed remarkable improvement, but signed her release from the hospital and left before further studies could be made.

She was next seen on July 10, 1939, two months later, when she was admitted to the obstetrical service of St. Philip Hospital, with a diagnosis of ruptured ectopic pregnancy. At the time of this admission, she was in extreme shock. The abdomen was so distended and tense that no definite masses were detected. Pelvic examination, after her condition improved, revealed bulging into both fornices, with extreme tenderness. There was no external bleeding.

Laboratory studies revealed red blood cells 3,600,000; hemoglobin 58 per cent (Sahli); and white blood cells 18,250. A catheterized specimen of urine showed albumin two plus. The blood count, repeated two hours later, revealed hemoglobin 28 per cent and red blood cells 2,600,000.

A suitable donor was obtained, and after her condition improved with treatment for shock, she was taken to the operating room. She was operated upon under general anesthesia about two hours after admission, receiving a citrate blood transfusion during the operation.

At the time of the operation, a penetrating type of hydatidiform mole, with spontaneous rupture of the uterus, was found. There was a large amount of dark blood in the peritoneal cavity. The cervical stump, uterine wall, and right broad ligament were all invaded by the mole. A supra-cervical hysterectomy was done, and the abdomen closed as quickly as possible because of the critical condition of the patient. The blood pressure and pulse were imperceptible during the last half of the operation. She was transfused again four hours after the operation, given continuous nasal oxygen and various stimulants. She died about eighteen hours postoperative, without ever regaining consciousness.

Second Case: M. J., a 37-year-old married colored multipara, was admitted to the medical service of St. Philip Hospital on August 24, 1938, referred from the medical clinic of the out-patient department, because of elevated blood pressure, associated with marked edema of the lower extremities, dyspnea on exertion, and some menstrual disturbances. She had noticed the dyspnea and edema for one month. Her last normal menses had occurred three months previously, but she had "spotted" at intervals during this period of amenorrhea. Her last pregnancy was a normal spontaneous delivery of a full term, living child, three years prior to admission.

Her blood pressure was 185/95. The fundus was enlarged to the level of the umbilicus. There was

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extreme edema of both lower extremities. Red blood cells 2,500,000 and hemoglobin 55 per cent (Sahli). The admission impression was that the patient had a uterine pregnancy (five months), with an undetermined type of toxemia. It was later felt that she probably had some cardiac decompensation, with a beriberi type of heart, and a fairly severe anemia. She had been digitalized in the clinic and given mercuperin for the edema. The digitalis was continued in the hospital.

Her blood pressure remained around 180/100; the edema decreased some, but not entirely. After two weeks, the uterine mass had increased from the size of a five months pregnancy to the size of a term pregnancy. The Aschheim-Zondek test was positive. A flat X-ray film of the abdomen revealed no evidence of foetal skeletal outline.

She was operated upon on September 9, two weeks after admission to the hospital, at which time the uterus was found symmetrically enlarged to the size of a term pregnancy, and filled with hydatidiform mole. A supra-cervical hysterectomy was done, and a citrate blood transfusion given soon after operation.

The patient's postoperative course was uneventful, and she left the hospital on the fifteenth postoperative day. The blood pressure on discharge was 135/95, hemoglobin 79 per cent.

An Aschheim-Zondek test seven weeks postoperative was positive; another seven months postoperative was negative.

Third Case: J. M., a 25-year-old- married colored multipara, was admitted to the obstetrical service of St. Philip Hospital on November 6, 1939, referred from the Medical College of Virginia prenatal clinic, with a diagnosis of threatened late abortion (4 months), with associated or complicating hyperemesis gravidarum.

After observation, she was suspected of having a hydatid mole because of a combination of symptoms including excessive nausea and vomiting, anemia out of proportion to the amount of blood loss, mild abdominal cramps, moderate amount of intermittent vaginal bleeding, and some enlargement of the uterus. The nausea and vomiting had responded fairly well to treatment, but she continued to "spot" and bleed in small amounts, and complained of abdominal cramps. The uterus corresponded in size to the period of amenorrhea.

Eight days after admission, a spinal puncture was done and the spinal fluid used for an Aschheim-Zondek test, which was reported as negative. Two days later, the patient expelled spontaneously a mass of hydatidiform mole about the size of a grape-fruit.

She ran a low grade, septic fever for a few days after passing the mole. After this subsided, a dilatation and curettage was done, and only a small amount of tissue removed.

Following the curettage there was no vaginal bleeding, and she was discharged from the hospital one week postoperative, in good condition.

Aschheim-Zondek tests, one week and one month postoperative, were positive. Another test, eighteen weeks, postoperative, was negative.

Fourth Case: V. E. D., a 16-year-old married white primigravida, was admitted to the obstetrical service of Memorial Hospital on October 13, 1940, referred by a local physician because of vaginal bleeding and abdominal cramps. Last menstrual period July 17, 1940.

A brownish-bloody vaginal discharge was present for a month before admission to the hospital. Ten days before admission, she started having profuse bleeding from the vagina at intervals, without pain. A physician was called at that time and bed rest advised. The bleeding continued intermittently in small amounts until the morning before admission. At that time, the profuse bleeding started again, associated with severe pain through the lower abdomen.

At the time of admission to the hospital, she was complaining of fairly severe lower abdominal cramps and still bleeding profusely. Pituitrin 1cc. was given soon after admission (in emergency room) in an effort to check the bleeding. Temperature was 99, pulse 96, and respirations 20. The blood pressure was 120/60.

Examination was essentially negative except for the abdominal findings. The uterus was enlarged to the size of a four months pregnancy.

Laboratory studies revealed red blood cells 4,050,000; hemoglobin 73 per cent (Sahli); white blood cells 18,300. Urinalysis (catheterized) was negative. Wassermann was negative.

On the night of admission to the hospital, she passed a large mass of tissue which grossly resembled hydatid mole. A small amount of bleeding continued. Six days later (Oct. 19th), a dilatation and curettage was done under spinal anesthesia and a moderate amount of tissue was removed. A pelvic

examination done at the time of curettage showed the uterus to be twice normal size; adnexae were normal.

The pathology department reported that the tissue was hydatid mole with no evidence of malignancy.

Her postoperative course was afebrile and uneventful. On October 21st, the second postoperative day, a Friedman test on urine was strongly positive, but was negative on spinal fluid. Her blood count remained approximately the same, and the blood pressure remained normal during the entire hospital stay, a period of eleven days.

She was next seen in the obstetrical clinic of the out-patient department on October 29th, 5 days after leaving the hospital, at which time the examination was negative. There had been no further bleeding and she had no complaints.

An Aschheim-Zondek test on November 12th was weakly positive. A Friedman test on December 20, 1940, two months postoperative, and another on January 16, 1941, three months postoperative, were both negative.

She was last seen on April 9, 1941, approximately six months after passing the mole, and at that time her pelvic tissues were normal and she had no complaints. Her menses had been regular and normal in every respect.

Two other cases, similar to the fourth case reported above, were treated in a similar manner and discharged after repeated negative Aschheim-Zondek tests.

In *Summary*, it has been observed that:

1. The uterus is not always enlarged out of proportion to the period of amenorrhea in cases of hydatid mole, as some texts would lead one to believe. On the contrary, the uterus may be even smaller than expected for the period of amenorrhea.

2. Toxemia and beriberi type of heart, with some cardiac decompensation, is frequently seen in cases with hydatid mole. The electrocardiogram resembled that seen in patients with severe nutritional deficiency.

3. One should suspect hydatid mole in a patient who has a combination of excessive vomiting; "spotting" or bleeding; with mild, or moderately severe, lower abdominal cramps; with anemia out of proportion to blood loss; and regardless of whether or not the size of uterus corresponds with the period of amenorrhea.

4. One should not depend on one Aschheim-Zondek test. The spinal fluid Aschheim-Zondek test is not always positive in cases with mole.

5. These cases should be followed closely with Aschheim-Zondek or Friedman pregnancy tests at intervals after removal of the mole to rule out the possibility of chorio-epithelioma.

6. An unusual case of benign penetrating mole with spontaneous rupture of uterus has been reported.

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RECENT MORTALITY FROM MALARIA IN THE UNITED STATES*

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In the VIRGINIA MEDICAL MONTHLY for June, 1939, was published a paper by me presenting the statistics of the mortality from malaria in the United States from 1900 to and including the year 1937.

Beginning in 1900, the death rate for malaria in the census registration area of the United States was 7.9 per 100,000 population. Under the influence of vigorous antimalarial procedures then instituted the rate steadily declined to 3.9 in 1905. From that year to 1937, the rate fluctuated in cycles of a few years each (the "five-year cycles" of the malariologists) from 3.8 to a minimum of 1.9 in 1926, without much change in the general trend.

The statistics of malaria mortality for the subsequent years 1938, 1939, and 1940, now available, are, however, so markedly different from their previous course, and show such a significant and happy change in the trend, that a brief presentation of these recent figures may be of interest.

*Supplementary to paper published in the MONTHLY in June, 1939.

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Briefly, the death rates from malaria in this country for the three years were as follows: 1938, 1.8; 1939, 1.3; 1940, 1.1. For purposes of comparison the annual mortality for the entire period 1930-1940 may be exhibited as follows:

Year	Death Rates per 100,000 of population	Numbers of Deaths
1930	2.9	----
1931	2.1	----
1932	2.1	----
1933	3.7	4,678
1934	3.6	4,520
1935	3.5	4,435
1936	3.1	3,943
1937	2.1	2,729
1938	1.8	2,378
1939	1.3	1,761
1940	1.1	1,442

These figures show that since 1937 there has been a sharp and continued decrease in mortality from malaria in the United States, to much the lowest rates on record, and to figures so much lower than any previous record and than any previous natural or cyclic fluctuation as to indicate that new conditions antagonistic to the disease have been established.

The great bulk of malaria deaths in the United States occurs in the Southern States, 97.0 per cent in 1933, 94.2 per cent in 1940, and the fluctuations in the annual death rates are due to the mortality in that section. In the Southern States taken by themselves the death rate from malaria in 1930, excluding Texas (complete statistics for which were not available until 1933), was 10.2 per 100,000 of population. In the same states in 1940, the rate was 3.4; or including Texas 3.3 per 100,000. This shows a dcrease in southern malaria mortality in 1940 to one-third the rate that prevailed in 1930.

This recent marked and unprecedented reduction in the mortality from malaria in the United States, and especially in the Southern States, may be taken as an indication that new factors entered into the situation. The most obvious explanation of this decrease of malaria mortality that took place from 1937 to 1940, is that it was the result of the energetic and extensive antimalarial measures that were being carried out in the South. It is evidence of the success of those measures and of their value in the reduction and elimination of morbidity and mortality from an insidious and persistent disease which, unchecked, is one of the great scourges of mankind. Though there is much yet to be accomplished, the results already attained in this country can be regarded with felicitation and pride, and the possibilities for further progress and achievement are very promising and hopeful.

MEDICAL SERVICE TO THE SICK AND WOUNDED*

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When I received your invitation to address this memorial assemblage on this, another anniversary of the Armistice which ended World War I, I accepted gladly and with full appreciation that it is a distinct privilege to take part in a ceremonial which is an annual observance by this organization.

As a representative of the Office of The Surgeon General of the Army of the United States, I bring you his greetings and assured confidence that the medical profession will continue to meet the demands put upon it by the Armed Forces in the same hearty manner in which it has responded during the recent period of training, mobilization, and active participation in this World War II.

On this day and at this hour no doubt many of you who were in service during Warld War I, or who had relatives in the Armed Forces and who now have relatives or are yourselves members of the Armed Forces in this, another global conflict, turn your thoughts backward twenty-four years as I do to a November in France when, with the cessation of hostilities, we believed that our generation and succeeding ones would be spared the hardships and trials of another such struggle. Our thoughts on that November morning were happy ones. It is true

*Address at Armistice Day Exercises of Veterans' Association of Base Hospital No. 45.

there was a mingling of sadness for comrades who made the full sacrifice, but relief at what seemed to be the end of a bloody strife was combined with the hope that the sacrifice had not been made in vain.

Throughout the quarter century which has passed since that day many factors have combined to precipitate another and even more widespread World War into which we have inevitably been drawn. It is not for us to say that this strife could have been avoided or how it could have been avoided; it is only for us now to take our place on the battlefront of the Allied Nations and to carry through to a successful conclusion the conflict which shall decide the survival of civilization through many centuries to come. It is not given us now to debate; we have no choice but to go forward in the defense of Democracy and the freedoms under which we have been privileged to live in this country and in this hemisphere for 166 years. The scope of this War, with its new techniques of destruction, have drawn into the area of battle not only fighting men but civilian populations, including the aged, the crippled, young children, and women. For the first time in modern warfare the indescribable destruction of properties and the slaughter of non-combatants has become a planned part of the enemy's attack. The very nature of the conflict, therefore, has engaged every facility and the full energies of every individual in this hemisphere. We have seen and been a part of many activities of training and mobilization and now are actively at battle stations in far flung parts of the world, as well as here at home.

In this vast organization medical men and troops play a most vital part in guarding the health of the Army, the health of the industrial workers who support its efforts, and the health of the civilian populations. The military requirements for physicians is therefore a matter of concern not only to the medical profession but to the entire population. The task of meeting these requirements is, however, not new. During World War I, Base Hospital 45, sponsored by the Medical College of Virginia, was organized in July, 1917, and subsequently went out from this city to eventually serve with the American Expeditionary Forces over a period of more than nine months. Under the direction of Dr. Stuart McGuire, the doyen of surgery in the South, the laymen and physicians of Richmond who were concerned with the organization, financing and equipping of Base Hospital 45 took on their new duties and accomplished their missions in a manner which is an everlasting tribute to their adaptability and resourcefulness, and an enduring source of pride to this community. The temporary loss of the physicians and surgeons who left with Base Hospital 45 created a shortage of medical and surgical services which was of concern not only to Richmond but to the surrounding country as well. Now again, just as in the last war, the people of this city and area are faced with the grim realities of war, which include the problem of meeting both the military and civilian requirements for physicians. It therefore seems to me appropriate to discuss some pertinent phases of the manifold requirements of the medical profession in the present crisis. The problems in general may be discussed under three categories: (1) Production of physicians; (2) Procurement of physicians, and (3) Placement of physicians.

In considering the first point, namely production, it is easily recognized that this is of fundamental importance. Certain definite limitations imposed by the requirements for a medical education make it undesirable, if not impossible, to increase the number of physicians in too hurried a manner. The expanded requirement for physicians could not be met by accelerated educational programs alone, and standards at this time must be vigorously defended, being relinquished only under the gravest pressure of emergency. The difference between the present production of doctors in accredited medical schools of the United States and the loss of doctors by age retirement and for other causes shows an annual gain of from 1,500 to 1,800. Obviously, one cannot build up large numbers of replacements from such a small pool. However, the recent steps taken by many medical schools to accelerate curricula will give the same number of physicians at the end of three years that we formerly obtained in four.

Every effort has been made and is now being made to utilize the services of every available physician regardless of his age; the young men in Service, the over-age men and the physically unfit in industry and civilian practice. Even with the utilization of alien physicians and with the acceptance of graduates of non-accredited medical schools under modified regulations, the demand is still going to be far greater than the supply. This, I think, is one of our most pressing problems, and we must constantly be alert to maintain medical school stand-

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ards as high as is possibly consistent with the requirements for an increased total number of physicians. To this end it should be recognized that medical school faculties must be maintained at a high level of efficiency, albeit they must replace most of their men under the age of forty-five. A corollary which I would emphasize, emphatically, is the necessity of making changes in medical school faculties slowly. Replacements must be made in such a way as to avoid confusion with resulting detriment to the entire program. By the same token, it is incumbent upon medical schools and teaching hospitals to make these changes as quickly as possible in the full realization that not only are readjustments vitally essential to the over-all program, but that it is much simpler and more effective to make them voluntarily than under duress and compulsion. It is my belief that the vast majority of medical schools and teaching hospitals have shown fine cooperation in this matter and I have great confidence that this state of mind and type of action will continue to be the rule when the stringent and rigorous military campaign of the future imposes more and more restrictions on them and demands even greater sacrifices on their part.

The second point—procurement—is one of even more pressing importance. Physicians in service, either in the Armed Forces or supporting the Armed Forces in industry and civilian practice, have a common goal—proper medical care. The magnitude of the task confronting the medical profession can only be appreciated when one pauses to consider the number of men in the Army and the demands for proper care of health among civilian and industrial workers. To those of you who have experienced military service the problem is more real than to those who have not. Yet changes which have occurred since the first World War are so great that the problem of furnishing medical care to troops is vastly different from what it was in former years. This is the outcome of mechanization of armies, which spreads battlefields over enormous spaces, and secondly, it is the result of dastardly attacks on civilian populations.

The problems of procuring, assigning, and transferring physicians to Army duties is the function of the Personnel Division of the Surgeon General's Office, albeit procurement has until recently been largely the function of the Procurement and Assignment agencies of the Federal Government as well as associated State units. This function of the Personnel Division must meet all demands and maintain a proper balance between internists, surgeons, and specialists in all fields of medicine. Doctors are a necessity. There are only a limited number available. These must be rationed, and those obtained by the Armed Forces must be assigned and reassigned according to varying essential needs. The crux of the present situation is the fact that assignment of physicians is an outstanding problem of the Armed Forces, and must always be decided according to military requirements. At times the assignment may seem to work to the disadvantage of an individual, but the good of the Service as a whole is more important than personal desires and advantages. It is impossible to assign every doctor to a position for which he is eminently qualified, or for which he considers himself qualified. Although inequities exist and always will be present, it is the belief of The Surgeon General's Office that a remarkably high level of accomplishment has been attained in this respect. It is necessary that all military establishments be so manned by medical personnel as to furnish each soldier with adequate care. For example, each tactical unit has a medical detachment, the largest of which is the medical battalion attached to a combat division. Here work is hard and filled with action of the sort which taxes to the utmost the training of the medical officer. The service he renders must be as good as the best, despite the fact that he frequently works under conditions which approach the impossible. Good medical officers recognize no impossibility.

A second line of medical units are the hospital units, which are of two kinds—fixed and mobile. Of the fixed hospitals, there are the named general hospitals located at certain permanent Army posts or at other appropriate places in Continental United States and in the several territories. Numbered station and general hospitals are activated at points of military needs, either in the Zone of Communication or the Zone of The Interior. Their function is to provide highly skilled specialists required for the treatment of the unusual cases which cannot be adequately cared for further forward.

Mobile units include numbered evacuation and field hospitals, hospital trains, and auxiliary teams. They vary in size from a small unit of twenty-five beds to the larger ones capable of caring for 1,000 or more patients. Their duties are arduous, and

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their location in the zone of combat is frequently under fire, but facilities for adequate medical care are nevertheless maintained and must be continued, regardless of difficulties.

The morale of the Army depends in a large measure upon the type of medical care rendered to the wounded soldier, especially in the Zone of Advance. This factor alone makes the function of these units a matter of extreme importance. Since this war began, the Surgeon General's Office has authorized the formation of auxiliary surgical groups which start as a parent organization composed of teams of general surgeons and specialists. These teams are capable of doing all types of surgery, and they will be sent, either singly or in groups, to theatres of operations where they will care for the wounded, working either in mobile units or in installations of their own. This departure from custom and past procedure will unquestionably be the means of saving many lives and limbs, for in mechanized warfare with rapid troop movements, the necessity of bringing the surgeon to the patient has become more urgent than in any war of the past.

Now all these units must be furnished with personnel by The Surgeon General's Office and the various installations described must be adequately staffed through proper distribution of available physicians. When physicians decide to come into the Army, applications for commission are received at the Surgeon General's Office from two sources: (1) direct application for commission; (2) applications through Medical Recruiting Boards. This latter method of procurement, which was an acceleration and expansion of the voluntary program instituted earlier by the American Medical Association through its war-time committee and the Procurement and Assignment Agency, has supplied to the Service an adequate number of physicians to fill the needs of the Army up to January 1, 1943, under the present tables of organization. Indeed, in many States of the Union these Recruiting Boards have already been withdrawn because the estimated quota of physicians has been recruited for the Army. There are a number of States, however, in which the quota has not been met, and in some of the larger States there has been an unexplainable reluctance on the part of so many men to come into the Armed Forces that their quotas are not more than two-thirds filled at the present time.

Although the needs of the Army have been accomplished temporarily, it is still the function of Procurement and Assignment, with the assistance of recruiting teams, to obtain large numbers of physicians from many of the more populous States where the urban population is particularly concentrated. It has been agreed by The Surgeon General of the Army that active recruitment by Army teams will be held in abeyance until January 1, 1943, in the group of States whose quota is filled. Definitely the Army will need more doctors during 1943. Definitely the Army must have younger doctors and it is to be expected that this will be accomplished through further hearty cooperation of the Procurement and Assignment Service with the Army.

Perhaps it might be useful to deviate for a moment to discuss the question of rank and promotion. Any man who loses his desire to go forward is doomed. Therefore, the desire for promotion is a healthy one and should not be frowned upon, but rather encouraged as a sign of healthy interest in our work. With our rapidly expanding army, there must be many promotions and they can be given only to those who are on active duty. They must be earned by the merit of the individual, combined with a recommendation from his Unit Commander. Certain regulations control these changes, one being the requirement that each man must hold the last grade for a minimum period of six months. The man commissioned in June, 1942, is not eligible for promotion until January, 1943. In the October 10th issue of *The Journal of the American Medical Association*, a statement authorized by the Office of The Surgeon General relative to the recruitment of physicians for the Medical Department of the Army pointed out many important facts bearing on this particular problem. Physicians who volunteered in the training period in 1940 and 1941 must be promoted, other things being equal. Obviously, men coming in late should not expect preferment over men who have already spent one year or eighteen months in Service. Initial appointment in field grade is limited now because the percentage of men in field grade in the Medical Corps of the Army is slightly above that allocated to the line. Appointments in field grade are constantly being made for position vacancies, but they are being given to men over forty-five years of age, and in some instances over fifty-five years of age, who are to fill responsible positions such as Chiefs of services.

Let me emphasize again that active recruitment

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must continue to keep pace with the needs of the Armed Forces. Young physicians are needed. In many cases they seem reluctant to enroll and I am regretful to say that in many communities older physicians have gone in advance of some of the younger members of our profession.

The questions of gravest importance to doctors under forty-five years of age are "What will happen to me in 1943?" "Will I be going into the Service?" These questions can only be answered by generalizations, but it is not too much to say that some facts are quite apparent, particularly to those who have watched the progress of procurement of physicians during the past six months and who have read the newspaper accounts of the increase in the size of the Army which is to continue through 1943 and even further. The new Army which we are building will need many more physicians. The natural deduction is that many thousand more will be called for during 1943. The exact number cannot be stated, but it is safe to predict that the vast majority of the physically qualified physicians under forty-five years of age will be serving in the Armed Forces before this war is over. The Office of The Surgeon General has at all times tried to work in close cooperation with the Manpower Commission. No physicians are called whose services are classified as essential to the community, either from the standpoint of a physician or a teacher. Medical schools must function in order that the future supply of physicians may be assured. There is no inclination to interfere with civilian medical care but, unquestionably, there must be some modification of medical practice, since the supply of physicians must be spread more thinly. It is impossible to increase materially the supply under present-day medical educational standards, albeit the accelerated curriculum system will, at the end of four years, produce about 5,000 more physicians than would have been produced under the old system. Cooperation of all elements is essential in this struggle. The needs of the Army come first, I believe, and the work of building the Medical Corps must continue. The production of physicians under present-day standards must go on as long as the present emergency permits. The urgency of our national crisis increases and will be felt more and more in the coming months. The needs of the Army will be harder and harder to meet, but they will be met in the future as they have been met in the past, courageously and fully. Of that every American is certain.

In anticipation of the desires of the Medical Profession of Richmond and as a token of his recognition of its brilliant performance in the last War, The Surgeon General, on March 11, 1940, invited the Medical College of Virginia to assume the responsibility of organizing the 45th General Hospital as an affiliated Medical Department Unit, thus reincarnating, and continuing the wartime tradition of, Base Hospital 45. The Unit was activated at Camp Lee, Virginia, on May 15, 1942, and officer and nurse personnel were ordered to that station for training.

The change from civilian to military life demands not only many personal adjustments, but necessitates the assumption of procurement, organizational, and innumerable other hitherto unaccustomed functions. Imaginativeness and the exercise of a high order of ingenuity is required in anticipating and meeting the exigencies which inevitably arise in the large scale professional service which the medical officers and nurses of General Hospital 45 will render. Fine judgment of personalities and careful estimation of abilities will be called for in delegating responsibility, and in assigning the manifold and arduous tasks which face them. Backed by a rich heritage, possessed of professional skill, and imbued with enthusiasm and a keen desire to serve, the staff of General Hospital 45 is prepared and ready to contribute its part in perpetuating the glorious annals of Virginia medicine and surgery.

MENTAL HYGIENE ACTIVITIES

During the meeting of the Southern Medical Association in Richmond from November 10th to 12th, there were a number of papers dealing with the problems of mental hygiene. Perhaps the large number of papers concerning direct questions of mental hygiene read in the various sections shows very admirably that doctors are beginning to think more and more in terms of the total personality of the individual rather than in terms of some specific disease. It is gratifying to see questions of mental hygiene incorporated in discussions of the different sections of an organization such as the Southern Medical Association. It seems that there is a growing tendency toward the belief that a healthy mental

attitude is necessary to bring about restoration of the patient suffering from some physical condition. In a General Clinical Session Dr. Thomas W. Murrell, of Richmond, gave a paper on *The Psychology of Acne.* Dr. Murrell's discussion brought out some very interesting mental hygiene facts. The biggest problem in relieving acne in children is the fact that the physician is not allowed to treat it. In spite of the fact that parents love their children and plan for their wholesome development they neglect this phase of the child's health because it is believed to be a transient and natural condition. This thought is probably tied up or based upon folklore and unscientific beliefs. Because acne is not treated properly it remains as an unsightly condition causing the boy and girl to withdraw from the social group. Thus an increasing seclusiveness probably accounts for the development of an inferiority complex in a large number of boys and girls during adolescence. Closely allied to this situation is the gang attitude which may later lead to juvenile delinquency.

In the Section on Neurology and Psychiatry Dr. Gregory Zilboorg, of New York, an invited guest, delivered an address on *The Actual Goal of Psychiatric Therapy.* Even though it is impossible to objectivize mental health, as it is physical health, we should not be discouraged nor should we be deterred from attempting to alleviate mental illness. Dr. Zilboorg showed very appropriately and very vividly that the form of government under which the individual lives may affect his mental health. Briefly he traced our present democratic form of government, as it is known today, from its primitive form when it consisted of the father as a dictator who ruled with an iron hand. This method of ruling naturally caused hatred of the dictator because there was at no time any opportunity for the expression of individual instinctual drives. This lack of opportunity for expression of strong impulses resulted in killing the dictator and jealousy amongst the sons. It is in this way that the lack of opportunity on the part of the individual to give expression to his feelings leads either to the development of a psychoneurosis, a psychosis or to criminality.

Again very beautifully Dr. Zilboorg brought out that in our present day democratic setup there is ample opportunity for the expression of these unwholesome impulses. Even during political campaigns, individuals are given to saying rather harsh things at times, but at least they are able to free themselves of their innermost feelings. Then after the campaign is over there is again unity of purpose in the government. For this reason it is not possible or even desirable to "lobotomize" or analyze a patient into a perfect state of conformity, but it is possible and desirable only to brjng about in a particular patient the ability to live in corformity with the existing environmental circumstances. Inasmuch as mental illness is the result of a clash between instinctive impulses and environmental influences, we should try to bring about in the maladjusted individual a wholesome way of living in the social group.

CASE REPORT OF MATERNAL DEATH

MATERNAL HEALTH COMMITTEE
MEDICAL SOCIETY OF VIRGINIA

The patient was an eighteen-year-old white primipara who had adequate prenatal care from the second month of pregnancy. No abnormalities were noted during the prenatal period. She was delivered spontaneously in a hospital after an uneventful labor of eight hours. The postpartum course was uneventful and she was discharged from the hospital on the fifth postpartum day, returning to her home in an ambulance. She remained in bed at home until the tenth postpartum day, during which time she was seen by her physician. She was allowed out of bed at intervals from the tenth day on. She died suddenly on the fifteenth postpartum day immediately after having nursed the baby. Autopsy was not performed.

COMMENT

This has been classified by the committee as a nonpreventable obstetrical death. It may reasonably be assumed that death was due to pulmonary embolism, although no autopsy was done to confirm the diagnosis. There seem to have been no failures in the care and management of the patient, and it must be assumed that the death was, in the light of our present knowledge, unavoidable. This case also

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illustrates as did the one reported in the JOURNAL last month, the minimal mortality, which will inevitably occur in association with pregnancy and confinement.

Public Health Statistics

I. C. RIGGIN, M. D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for October, 1942, compared with the same month in 1941, and for the period of January through October, 1942, compared with the same period in 1941, follows:

	Oct. 1942	Oct. 1941	Jan.-Oct. 1942	Jan.-Oct. 1941
Typhoid and Paratyphoid	38	87	223	268
Diarrhea and Dysentery	423	1,068	4,364	5,201
Measles	39	95	4,842	34,716
Scarlet Fever	291	141	1,163	1,157
Diphtheria	189	151	521	462
Poliomyelitis	7	33	40	117
Meningitis	14	3	140	92
Undulant Fever	3	3	28	12
Rocky Mountain Spotted Fever	3	0	45	31
Tularemia	1	3	33	25

POISON GAS INSTRUCTIONS

Despite the fortunate fact that in the present war poison gas has not been employed as a weapon, the possibility of its use has not been overlooked either by the military or civilian defense organizations of all nations throughout the world.

Through magazine and newspaper pictures, Americans are familiar with the gas mask issued to civilians and soldiers in the British Isles, and through the same sources, realize that the United States soldier is equipped with this protective device and is taught its use under simulated battle conditions.

Virginians, and indeed all Americans, likely will be spared the hazards of war gas on the home front. It is to be hoped devoutly that on the battlefields of Europe, Asia and Africa this cruel instrument of chemical warfare will continue to remain inactive. Nevertheless, no matter how remote this likelihood may be, the United States and State Offices of Civilians Defense wisely have set down a few basic rules for all citizens, should the unexpected occur in the United States.

On the theory that to be forewarned is to be forearmed, therefore, the following suggestions, carrying the approval of the State Office of Civilian Defense and the State Department of Health are offered:

If one has been exposed to war gas:

(a) Get out of the area and into a building. Before going inside, remove the outer clothing and shoes and leave them outside.

(b) Wash hands first, and then face, with soap and water.

(c) Irrigate or wash eyes at once with a large amount of a solution of baking soda (one teaspoonful baking soda to a glass of water). If no soda is available, use plain water.

(d) Take a shower or bath, using plenty of soap.

(e) Wash eyes again with baking soda solution.

If liquid gas gets on the skin:

(a) Use pieces of cloth or cleansing tissues to blot as much of the liquid as you can from your skin. Do not rub the skin as this will spread the liquid.

(b) To the contaminated areas of the skin, apply a household bleaching solution, such as Clorox, full strength. Do not, however, waste time looking for Clorox; bathe immediately with soap and water as directed above.

If your chest feels heavy, if you have trouble breathing, or if cigarette smoke becomes distasteful, lie down and remain quiet until a doctor sees you.

Keep as calm as possible. Follow the above instructions without wasting time. Seek medical attention as soon as possible. Permanent disability following injury by gas is uncommon.

Remember: Soldiers require gas masks because they must remain in the gas contaminated area. Civilians can get out of the gassed area.

By following the above relatively simple procedures, the layman frequently can prevent serious injury if he is exposed to a war gas. Prophylactic measures must be applied promptly to be effective. Exposure to most war gases does not render one helpless until several hours have elapsed.

It should be remembered that gas is the one weapon against which the layman can protect himself rather effectively. If he is struck by a high explosive bomb or burned by an incendiary, there is relatively little that he can do. If, however, he gets into an area contaminated by gas, by following

a few simple rules the severity of injury may be decreased.

General rules include:

1. A warning of gas will be given by the local air raid warden by a banging noise such as incessant hitting on a pan with a wooden stick or use of large wooden rattles. Some individuals will learn how to recognize the smell of different gases, but even if you do not recognize the exact type of gas, obey the general rules.

2. War gases are heavier than air and tend to stay close to the ground. If you are indoors, stay there. Close doors and windows, turn off air-conditioning, stop up fireplaces, and go to an upper floor; avoid basements and other low places. To get out of a gassed area, *walk, do not run,* against the wind.

3. War gases act on the eyes, skin or lungs. Prevention of injury depends largely upon prompt use of simple remedies which persons otherwise uninjured can apply to themselves.

Physicians can render a real service to their patients by making available to them the information given above. If it should become necessary for citizens to know what to do in the event of a gas attack, such knowledge will establish a genuine measure of protection for them.

In time of war, it is logical to prepare for any emergency, even if present circumstances and past performance make them appear extremely remote.

Miscellaneous

The Four Horsemen Ride Again.

War has once again loosed the Four Horsemen of the Apocalypse upon the world . . . fire, famine, sword, and pestilence. In the last war, the most deadly of these was pestilence, and today, in Europe and Asia, there is already an alarming increase in tuberculosis.

It is generally agreed in the medical profession that the prevention of disabling and fatal tuberculosis depends upon early diagnosis and prompt treatment. If this truth alone were generally known and applied by the whole population, tuberculosis could be kept to its steady retreat in spite of war.

During 1943, the tuberculosis educational campaign, which is supported by the Christmas Seal Sale, must be intensified if we are to keep tuberculosis under control.

The armed forces of the United States have taken a great step forward in preventing tuberculosis among their men by the routine chest X-ray and a recent report from the Canadian Army shows how valuable this type of examination has been.

Out of the 400,000 men examined preparatory to entering the Canadian Army between September, 1939, and March 1, 1942, a total of 3,969, or slightly less than one per cent, were rejected because of tuberculosis, according to a report by Lt. Col. W. R. Warner, R.C.A.M.C. The report states that only 114 cases of clinical tuberculosis have developed either in Canada or overseas in the entire Canadian Army as of March 1, 1942.

On the other hand, England and Wales admit their error in closing their tuberculosis hospitals during the siege of Britain and Dr. Percy Stocks, medical statistical officer, feels that this action must be held responsible for much of the increased mortality in the British Isles. Many of the patients died earlier than they might have done under continued hospital care and they inevitably spread the infection among their families. The decision to close tuberculosis hospitals has since been reversed, and a British report on this condition stated that "The only way an active case of tuberculosis will be gotten out of the hospital in England today is to be blown out with a bomb."

The increase in tuberculosis deaths in England and Wales has been 12 per cent since 1939 and 18 per cent in Scotland. The increase in deaths from tuberculous meningitis is 40 per cent in the first two and 50 per cent in Scotland.

It has been suggested that with the type of warfare, entailing mass evacuation, frequent visits to aid raid shelters and lack of adequate food and rest may account for the unprecedented rise in tuberculosis. No comparable advance was noted during the first two years of World War I.

Here in America the trend is upward in nineteen of our large industrial centers.

Health departments and volunteer tuberculosis associations are doing their best to meet this challenge, but we must have the support of the American people.

NORA SPENCER HAMNER, *Executive Secretary, Richmond Tuberculosis Association.*

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Proceedings
Medical Society of Virginia
ANNUAL MEETING
October 5, 6, 7, 1942
Hotel Roanoke
Roanoke, Virginia

SCIENTIFIC SESSION
Monday, October 5

The Medical Society of Virginia convened for its first general session on Monday evening, October 5, 1942, at 8:30 o'clock, in the ballroom of the Roanoke Hotel, Roanoke, with Dr. W. L. Powell, General Chairman of the Committee on Arrangements, presiding.

Following the call to order by Chairman Powell, the invocation was said by the Reverend A. H. Hollingsworth, of Roanoke.

It was announced that the guest speaker of the evening, Dr. James E. Paullin, of Atlanta, Ga., Professor of Clinical Medicine at Emory University, President-Elect of the American Medical Association, would not be present, his plane being unable to land at Roanoke because of the bad weather. Dr. Paullin, who is a member of the Federal Procurement and Assignment Board, was to speak on the subject, "The Role of the Medical Profession in the Present Emergency".

Chairman Powell presented the President of the Society, Dr. Roshier W. Miller, of Richmond, who read his address on "The Year's Activities".

Upon request of Dr. J. Bolling Jones, Chairman of the Membership Committee, President Miller read the following list of members whose deaths had been reported since the last annual meeting:

Dr. Joseph Frank Slade, Sussex, October 14. 1941.
Dr. Thomas Franklin Dodd, Alexandria, August 14, 1941.
Dr. Edmund Anderson Terrell, Fredericks Hall, September 18, 1941.
Dr. James Gordon Trant, Richmond, October 29, 1941.
Dr. Clarence Albert Ransom, East Falls Church, September 23, 1941.
Dr. George R. Sledge, Parksley, October 3, 1941.
Dr. A. B. Smith, Snowville, September 17, 1941.
Dr. Greer Baughman, Richmond, December 2, 1941.
Dr. Sidney Lockhart Scott, Fredericksburg, December 16, 1941.
Dr. John W. Bolen, Galax, November 2, 1941.
Dr. Robert Coalter Bryan, Richmond, December 24, 1941.
Dr. Harry L. Myers, Norfolk, January 5, 1942.
Dr. William Johnston Strother, Culpeper, February 14. 1942.
Dr. Charles Wilson Doughtie, Norfolk, March 5, 1942.
Dr. Charles McCulloch, Lexington, March 12, 1942.
Dr. Aaron Jeffery, Newport News, April 14, 1942.
Dr. William Binford King, Arlington, April 10, 1942.
Dr. William Roane Aylett, Tappahannock, April 25, 1942.
Dr. Roy Knight Flannagan, Richmond, June 18, 1942.
Dr. Noah M. Robinson, Vinton, March 5, 1942.
Dr. Henry G. Steinmetz, Flint, Mich., May, 1942.
Dr. Marvin Everette Nuckols, Richmond, July 21, 1942.
Dr. Arthur Blackwell Cosby, Big Island, June 26, 1942.
Dr. Horace Taylor Hawkins, Waynesboro, July 30, 1942.
Dr. Robert Newton Graham, St. Charles, July 29, 1942.
Dr. Luther M. Abbott, New Castle, August 16, 1942.
Dr. Thomas Lea Brooks, Oceana, August 21, 1942.
Dr. Joseph Lynn Deitrick, Norfolk, August 30, 1942.
Dr. Alexander Watkins Terrell, Lynchburg, August 30, 1942.
Dr. Joseph Hill Winfrey, Glen Allen, September 9, 1942.
Dr. Benjamin Alonza Rice, Forest Depot, June 16, 1942.
Dr. Littleberry Stainback Foster, Williamsburg, September 23, 1942.

The Assembly then stood for a moment in silence, in respect to the memory of those deceased.

President Miller presented Mr. F. M. Rivinius, Chairman of the Roanoke County Chapter of the American Red Cross, who addressed the Society on the subject of "American Red Cross in War Time".

The President announced that the following had been appointed as delegates to this meeting from the Medical Society of the State of North Carolina: Dr. Newsom P. Battle, Rocky Mount, N. C.; Dr. S. M. Bittinger, Black Mountain, N. C.; Dr. John C. Tayloe, Washington, N. C.; and Dr. Moir S. Martin, Mount Airy, N. C., but none of these gentlemen at this time responded to the President's invitation to make himself known.

At this point President Miller asked Mr. Lloyd G. Cecil, Laboratory Technician, Lewis Gale Hospital, Roanoke, to take the chair for the rest of the session. Mr. Cecil introduced Warrant Officer Henry R. Evans, Pharmacist, United States Navy, Technical Supervisor of the Red Cross Army-Navy Plasma Center, Bethesda, Md. Mr. Evans made a short address and then showed a moving picture on the preparation of plasma and another on the regeneration of plasma.

The evening session then adjourned, at 10:15 P. M.

Tuesday, October 6
Medical Section

The Medical Section of the Medical Society of Virginia met at 9:50 A. M. on Tuesday, October 6, in the ballroom of the Roanoke Hotel, with Dr. Roshier W. Miller, President of the Society, presiding.

Dr. T. Jefferson Hughes, Roanoke, read his paper entitled "Some of the Do's and Don't's in the Treatment of Fractures with Special Reference to the Rural Practitioners, Whose Burdens and Responsibilities Will be Increased by the National Emergency". (Illustrated by lantern slides.) This was discussed by Dr. Bernard H. Kyle, Lynchburg, and Dr. E. P. Tompkins, Lexington, and by Dr. Hughes in closing.

The paper of Dr. Benjamin M. Kagan, of Richmond,

on "The Clinical Significance of the Serum Proteins" was read by title, it being stated that Dr. Kagan is now in the Army.

Dr. William Bickers, of Richmond, read his paper entitled "Leukorrhea: A New Classification and a New Approach to Treatment" which was illustrated by lantern slides.

Dr. T. Dewey Davis, Richmond, read his paper on "Acute Cirrhosis of the Liver", which was discussed by Dr. Blanton P. Seward of Roanoke and by Dr. Davis in closing.

Dr. K. D. Graves, Roanoke, read his paper entitled "The Eyes as Portals of Entry for Certain Air-Borne Infectious Diseases". This was discussed by Dr. Fred E. Hamlin of Roanoke and, in closing, by Dr. Graves.

The paper of Drs. Paul D. Camp and Louise Galvin of Richmond on "Rheumatic Fever and Rheumatic Heart Disease in Virginia" was read by Dr. Camp and was discussed by Dr. Galvin. There was further discussion by Dr. J. Edwin Wood, Jr., Charlottesville, Dr. F. D. Wilson, Norfolk, and in closing by Dr. Camp.

The program having been completed, the Medical Section then adjourned, 12:00 o'clock noon.

Tuesday, October 6
Surgical Section

The Surgical Section of the Society convened in Parlors A and B of Hotel Roanoke, at 9:45 A. M., Tuesday 6, and Dr. James W. Anderson, vice-president, and Dr. Julian L. Rawls, councilor, both of Norfolk, took turns in presiding.

The first paper presented was that by Dr. Ernest L. Copley of Richmond on "Hypertensive Arterial Disease" and this was discussed by Dr. J. Morrison Hutcheson and Dr. C. C. Coleman of Richmond, and by Dr. Copley in closing.

The next paper, "A Further Report on the Use of Radium in Benign Conditions Causing Uterine Bleeding", was given by Dr. W. Lowndes Peple of Richmond. This was discussed by Dr. Alfred P. Jones of Roanoke and Dr. J. L. Rawls of Norfolk, with Dr. Peple closing the discussion.

Dr. Philip Jacobson of Petersburg, then read his paper entitled "Further Experience with Tubal Division in Salpingitis", which was discussed by Dr. Paul Davis of Roanoke.

A paper on "Surgical Treatment of Orbital Tumors" was next presented by Dr. C. C. Coleman of Richmond.

Dr. Linwood D. Keyser of Roanoke read a paper on "The Clinical Manifestations of Colitis and Its Treatment", this being discussed by Dr. George B. Lawson, also of Roanoke.

The last paper of this Section, presented by Dr. M. L. Dreyfuss of Clifton Forge and entitled "Benign and Malignant Lesions of the Urachus", was discussed by Dr. A. I. Dodson of Richmond.

Adjournment followed.

Tuesday, October 6
General Session

The Medical Society of Virginia reconvened in the ballroom of the Hotel Roanoke and was called to order at 2:45 P. M. by the President, Dr. Roshier W. Miller.

Dr. David C. Wilson, of University, read his paper entitled "Treatment of the Mental Diseases Related to the Involutional Period", which was discussed by Dr. Beverley R. Tucker of Richmond, and by Dr. Wilson in closing.

Dr. William B. Porter, of Richmond, at the request of the President introduced the next speaker on the program, Dr. Julian M. Ruffin, Professor of Medicine in Duke University Medical School, Durham, N. C., an invited guest.

Dr. Ruffin then read his address on "Amebic Dysentery: Its Recognition and Treatment—A Clinical Discussion".

Dr. Warren T. Vaughan, Richmond, presented his paper entitled "Lacquer Dermatitis" (illustrated by lantern slides), which was discussed by Dr. Wyndham B. Blanton of Richmond and Dr. D. C. Smith of University of Virginia.

Dr. William B. Porter, Richmond, read his paper entitled "Cardiodiaphragmatic Syndrome", which was discussed by Dr. Hugh H. Trout, Roanoke, and by Dr. Porter in closing.

The President then read a telegram of greetings and good wishes from Mr. C. P. Loranz, Secretary-Manager of the Southern Medical Association, following which the session adjourned.

Wednesday, October 7
General Session

The Society reconvened in the ballroom of the Hotel Roanoke and was called to order at 9:55 A. M. by President Miller.

The President read the following telegram received on October 5 from Dr. James E. Paullin, of Atlanta:

"Please extend to the Medical Society of Virginia my deepest regret in not being able to attend your meeting tonight. When American Air Lines plane passed Roanoke at 10:30 this morning it was impossible to land. At Bristol I was told it would be impossible to reach Roanoke by bus or train before nine or ten o'clock tonight. The flight was continued to Knoxville and then to Atlanta. Will you please express to the assembled members my deep disappointment in not meeting with you, and may I extend my congratulations to your Society for the important and patriotic service you are doing for American medicine and the Procurement and Assignment Agency. Better luck next time."

(Due to the fact that the lantern-slide projector had not been set up, the papers were taken up out of order.)

Dr. R. Finley Gayle, Jr., Richmond, read his paper entitled "The Care of the Mentally Ill in a General Hospital", which was discussed by Drs. J. Asa Shield and Beverley R. Tucker, of Richmond, and in closing by Dr. Gayle.

The President then presented the guest speaker for this session, Dr. Robert L. Bennett, Director of the

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Postgraduate School of Physical Therapy at the Georgia Warm Springs Foundation, who addressed the Society on the subject of "The Basis for the Newer Methods of Treatment in Acute Poliomyelitis".

The paper of Drs. Lewis W. McIlhany and Dudley C. Smith of Charlottesville, on "Epidemiologic Studies in Syphilis" (illustrated by lantern slides), was presented by Dr. McIlhany and was discussed by Dr. Thomas W. Murrell, of Richmond, and by Dr. McIlhany in closing.

Dr. Julian R. Beckwith, Clifton Forge, read his paper entitled "Adams-Stokes Syndrome as a Complication of Myocardial Infarction: Report of Two Cases Resulting from Different Underlying Mechanisms" (illustrated by lantern slides). This was discussed by Dr. J. Edwin Wood, Jr., Charlottesville, and Dr. Paul D. Camp, Richmond, and in closing by Dr. Beckwith.

Dr. H. Hudnall Ware, Richmond, read his paper entitled "The Physician's Responsibility in Planned Parenthood", which was discussed by Dr. W. R. Payne, Newport News.

Installation of President

PRESIDENT MILLER: We come now to a very pleasant duty—the induction of our new president. When I say it is pleasant it does not mean that I have felt the office a burden, nor am I weary of service. The year has been a very delightful one for me, first, because those in the office at Richmond have given unstintingly in service and, second, because all those whom I have called upon for help have responded willingly and generously.

This is a delightful duty because Jack is a good boy. He is a very worthy successor. Everybody loves him; everybody esteems him. I ask Miss Edwards and Dr. Moncure to escort Dr. Emmett to the platform.

Dr. Emmett, I turn over to you this gavel and assure you of my loyalty. I am willing to serve you during the year in any capacity, even if you call upon me to be your cabman.

DR. JOHN MOREHEAD EMMETT: Members of the Medical Society of Virginia, members of the Auxiliary, and President Miller:

Dr. Miller, by virtue of the excellency of his administration, his personal charm, and his eloquence, has established an example which it is going to be very difficult for subsequent presidents to compete with. Thirty years ago Dr. Miller was my instructor at the Medical College of Virginia. The years since then have in no way dimmed his ability to teach, and I am grateful to him for the information and inspiration that have come to me from my association with his administration.

When I review the accomplishments of my illustrious predecessors in this office I am embarrassed by my own limitations. I shall necessarily lean very heavily upon the Council and upon the membership and, last but not least, upon Miss Edwards, who will assist me very materially in directing the destinies of our Society during this coming year.

The Medical Society of Virginia has many problems to face during the year ahead. These problems can only be solved by a united front but, I am positive that with the information and the enthusiasm which have been manifested in this meeting, our members understand fully many of our difficulties. I particularly have in mind the preparation for the legislative battles which we must face in 1944. We can meet these problems only by each doctor assuming his responsibility of education and direction of his patients and the further education and direction of prospective legislators.

The success of my administration will be dependent, as is the success of all administrations, upon the voluntary support of the membership of our Society, and I have no reason to doubt your loyalty and your support. I am sincerely grateful to you for this honor which you have bestowed upon me.

I wish to announce now the appointments to the standing committees. I shall not at this time announce the special committees, the list of which will appear in an early issue of our JOURNAL.

President Emmett then read the list of committee appointments (published under President's Message in this issue of the MONTHLY).

PRESIDENT EMMETT: If there is nothing further to come up, the meeting is adjourned.

The Society then adjourned at 12:40 P. M., Wednesday, October 7, following which a number of members went to Catawba Sanatorium where lunch was served and the program was presented by the staff of the Sanatorium in conjunction with the Society of Chest Physicians of Virginia, with Dr. Roshier W. Miller presiding. The papers read were:

"Report on Culture Work of Microscopically Negative Sputum for Tubercle Bacilli for a Period of Eight Years" by Dr. J. B. Nicholls and A. W. Bengston, and

"Bilateral Artificial Pneumothorax in the Treatment of Pulmonary Tuberculosis" by Dr. L. R. Broome.

Following this, the meeting adjourned *sine die*.

Before and after the morning sessions on Tuesday and prior to the morning session on Wednesday, motion pictures were shown on "Post-Partum Hemorrhage" and on "Peptic Ulcer", both of which were well attended.

BUSINESS SESSIONS

Council

October 5, 1942

The annual meeting of the Council was held at the Hotel Roanoke, Roanoke, on October 5 at 11:00 A. M., with Dr. Roshier W. Miller, President, presiding. Others in attendance were Dr. J. M. Emmett, President-Elect; Drs. James W. Anderson and Ernest G. Scott, Vice-Presidents; Drs. Griffin W. Holland, Julian L. Rawls, J. M. Hutcheson, W. C. Akers, W. L. Powell, A. F. Robertson, Jr., H. B. Mulholland, and C. B. Bowyer, Councilors; Dr. I. C. Riggin, State Health Commissioner; Dr. Wyndham B. Blanton, Editor of the VIRGINIA MEDICAL MONTHLY; and Miss Edwards, Secretary.

The minutes of the Council meetings as published in the MONTHLY (February, 1942, pages 101-2; July, 1942, page 393; August, 1942, page 460) were approved.

A letter from Dr. Trout was read expressing his appreciation of the approval by the Council of the work done by him as Chairman of the Procurement and Assignment Service of Virginia.

Dr. Emmett, who had been appointed to look into the feasibility of a joint meeting with the West Virginia State Medical Association, reported that, after consultation with officers of that organization, it was their opinion that such a meeting should be postponed for the duration.

A letter was then read from Dr. Preston, secretary of the Virginia State Board of Medical Examiners, telling of the appointment of a committee from the Board to cooperate with the Legislative Committee regarding proposed amendments to the Medical Practice Act. This was referred to the Legislative Committee.

The secretary stated that the $2.00 increase in dues for the use of the Legislative Committee would be automatically discontinued this year unless otherwise provided. It was stated by one Councilor that there had been some criticism in his district of this additional charge, especially in view of the solicitation of the Special Fund. However, it was moved that the $7.00 dues be continued two more years and each Councilor was requested to explain to his District why this is being done. If the Councilors explain this to the members, it was felt there will be no question as to the advisability of the fund. The motion was seconded and carried.

The question of exemption from dues of members in the Services was next discussed, and it was moved and carried that this exemption be continued.

Mr. G. H. Winfrey, representing the American Mutual Liability Insurance Company, was then given the privilege of the floor and reported the experience of that company in the field of professional protection insurance for physicians in Massachusetts, New York and other states. He said his company had removed the extra charges for this professional protective insurance on doctors engaged in ethical contract practice, partnership practice, the specialties, etc., and offered to issue it to members of the Medical Society of Virginia on the same terms. After discussion, it was moved and carried that this be referred to the Medical Economics Committee.

Mr. J. A. Rorer, representing the Department of Clinical and Medical Education of the Society, stated that the work of the Department had been seriously affected by the war. In their report, they requested that the appropriation be the same as last year but, after due consideration, they had decided that they would need only $600.00 for the coming year.

The Budget, as prepared by Drs. Hutcheson and Powell, was then presented as follows:

BUDGET FOR YEAR
October 1, 1942—September 30, 1943

MEDICAL SOCIETY OF VIRGINIA	
Salaries	$2,880.00
Rent and Phone	365.00
Stationery and Office Supplies	75.00
Repairs and Replacement	40.00
Postage	225.00
Audit Fee	30.00
Social Security Tax	24.00
Miscellaneous	25.00
President's expenses	100.00
President-elect's expenses	50.00
Councilors and Officers' expense	75.00
Delegates to A.M.A.	100.00
Scientific Exhibits	350.00
Dept. Clin. and Med. Education	600.00
Medical Economics	75.00
Walter Reed Commission	75.00
Child Welfare	10.00
Maternal Health	20.00
Cancer	20.00
Medical Preparedness	75.00
Industrial Health	20.00
Convention expenses:	
Reporting	150.00
Programs	125.00
Badges	55.00
Registration cards	5.00
Reports for delegates	15.00
Invited guests	200.00
Publicity	60.00
	$5,844.00
VIRGINIA MEDICAL MONTHLY	
Salaries	$2,880.00
Rent and Phone	365.00
Preparation of journal	6,500.00
Stationery and supplies	35.00
Repairs and replacement	40.00
Office postage	45.00
Audit fee	30.00
Miscellaneous	20.00
Social Security Tax	24.00
	$9,939.00
Total	$15,783.00

It was recommended that this be adopted.

Dr. Bowyer stated that Dr. Trout had been to considerable expense in maintaining an office for the Procurement and Assignment Work. He had been paying the salary of a secretary for several months and although this would be taken care of in the future by the Government, they would not reimburse him for the past amount. It was suggested that the Council should make some recommendation to the House of Delegates about this and Dr. Powell was asked to look into the matter.

An opinion was asked as to the possibility of having a meeting next year. There seemed to be differences of opinion but no action was taken as it was felt this was a matter for the House of Delegates to decide.

Dr. Miller announced the names of several delegates who had been appointed from the Medical Association

of the State of North Carolina, and he hoped the Councilors would look out for them.

There being no further business, the Council adjourned.

AGNES V. EDWARDS,
Secretary.

HOUSE OF DELEGATES
October 5, 1942

The first meeting of the House of Delegates was called to order by the President, Dr. Roshier W. Miller, at 2:30 P. M., on October 5, in the Hotel Roanoke, Roanoke.

The minutes of the last meeting were approved as published in the December issue of the VIRGINIA MEDICAL MONTHLY (pages 703-14).

The budget, as approved by the Council, was then presented by Dr. J. M. Hutcheson. Dr. Bowyer stated that Dr. Trout, in connection with the Procurement and Assignment Service, had to employ a secretary, in addition to considerable other expense incident to the work. No arrangements were made to pay the salary of that secretary up to the present time but in the future this will be paid by the Federal Government. He recommended that the Society reimburse Dr. Trout for the secretarial work for the past seven months at $90.00 a month. This was seconded and carried, and the budget as a whole was then adopted.

The Council had also recommended that the $2.00 increase on dues for Legislative work be continued for 1943-4. Dr. Moncure moved that this be continued. Carried.

Dr. Dean Cole, Chairman of the Legislative Committee, then presented the following statement of the Special Fund:

SPECIAL FUND FOR LEGISLATIVE WORK

Balance on hand, October 1, 1941		$1,532.49
Receipts October 1, 1941-September 30, 1942		3,183.00
		$4,715.49
Disbursements:		
Attorney's Services	$700.00	
Preparation of material for Supreme Court	450.00	
Phone calls, letters, wires, etc.	284.85	
		1,434.85
		$3,280.64
Voluntary contributions solicited by Committee		$1,366.00

The question as to having a meeting in 1943 was next considered. Dr. W. D. Kendig moved that the decision be left to the Council. Seconded. Dr. P. St. L. Moncure stated that he thought the House of Delegates should handle this and decide whether or not to hold the meeting next year. Dr. Guy Fisher offered a substitute motion that the House of Delegates go on record as being in favor of having a meeting next year, and this was seconded and carried.

The delegates were given, a five minute recess to select the members of the Nominating Committee, and the following were named:

Dr. Griffin W. Holland, Eastville.
Dr. C. L. Harrell, Norfolk.
Dr. Frank Johns, Richmond.
Dr. W. D. Kendig, Kenbridge.
Dr. B. F. Eckles, Galax.
Dr. F. A. Farmer, Roanoke.
Dr. Guy Fisher, Staunton.
Dr. Percy Harris, Scottsville.
Dr. W. C. Caudill, Pearisburg.

It was announced that several delegates had been appointed from the Medical Society of the State of North Carolina, and the members were asked to see that these doctors were shown all courtesies.

The reports of committees, as published in the September, 1942, issue of the MONTHLY were next considered. The President announced that Drs. Julian L. Rawls and J. L. Hamner had been appointed to go over these reports in advance in order that special recommendations might be properly considered. He also stated that action on the reports would be taken as a whole after they had been presented.

Publication and Program (page 507). Dr. Blanton, chairman, stated he had nothing to add except that he was retiring as Editor this year and wished to thank the Society for its uniform courtesies during the ten years he had served.

Scientific Exhibits and Clinics (pages 507-8).

Department of Clinical and Medical Education (page 508). It was stated that the appropriation requested had been changed to $600.00.

Legislation (page 509-11). The report of this Committee received considerable discussion and it was the consensus of the House that the Society should support the program of the Committee. Dr. Cole, chairman, moved that the President of the Society be instructed to appoint a committee of three members to cooperate with the Advisory Council of the General Assembly in their study of the coroner situation in Virginia. Carried.

Membership (page 511). Attention was called to the fact that the retiring president was recommended for honorary membership, and this was adopted.

Judicial (page 511). Dr. Moncure, chairman, presented the following supplement:

In 1930 or 1931, Congress cut down our representation to nine instead of ten districts, which, according to the Medical Practice Act, automatically cut down the Medical Examiners to nine, and also the Councilors to nine. The new congressional division was no doubt really enacted for legislative purposes, but some of us working largely from a purely scientific standpoint and for the best interest of the Society made the recommendation for ten councilor districts, and this was passed unanimously by the House of Delegates at its session at Virginia Beach in October, 1941. We still think some Committee (the Judicial if desired) can continue to study the question of division of the State into Councilor districts best suited for our purposes. I, therefore, recommend to the House of Delegates for its adoption the following which embodies Dr. Robertson's resolution before the Council:

The State shall be divided into the same number of councilor districts as congressional districts and be comprised of the same counties; and the Judicial Committee should continue the study of such changes of its councilor districts as seem best suited for the interests of the Society.

As this necessitated a change in the By-Laws, it was laid on the table until the following day.

Advisory to the Woman's Auxiliary (page 511).

The following report from the Auxiliary President was then read:

MR. CHAIRMAN:

It is my privilege to give you a report for this year from your auxiliary. Having spent two years learning to know the auxiliary at work, I wish to say it is a very vital factor in the progress of organized medicine in the nation, in the state, and in the local society. Health Defense was the objective for the year, given us by the Auxiliary to the A.M.A.; our State theme has been "Educate and Evaluate"—educate ourselves and evaluate our learning so as to be the greatest help to the greatest number, not only in our own auxiliary but in the lay organizations to which we belong, and therein is found our strength.

The reports of our standing committees and local presidents show active work all along the line and accompany this report. An abstract of these will be printed in the MONTHLY.

We have with the consent of our advisors joined hands with the women's organizations in the state, helping to give a unified front in the war effort. If I went into detail on our work, this would be so long you wouldn't read it, so I am going to close with an appeal to each of you to ask your wife and sister and mother to join the auxiliary, either as a member of a local group or as a member at large, taking my word for it that it is quite worth her while.

Respectfully submitted,
(MRS. E. LATANE) LOUISE W. FLANAGAN,
President, Auxiliary to the Medical Society of Virginia.

Child Welfare (pages 512-3). Dr. F. D. Wilson, chairman, explained parts of this report and called particular attention to their request that legislation be secured requiring sectarian and non-sectarian schools to be inspected by the State Department of Health, and also that teachers in grade schools present satisfactory evidence of freedom from tuberculosis.

Maternal Health (pages 513-5). Dr. Groseclose, a member of the committee, called particular attention to the resolutions in this report and moved that the House approve them. Seconded and carried.

Walter Reed Commission (page 515).

To Arrange Medical Program of Virginia Conference of Social Work (page 515).

Pneumonia Commission (pages 515-6). Dr. H. H. Henderson, State Epidemiologist, explained certain points in this report.

To Confer with State Board of Nurses' Examiners (page 517).

Syphilis Control (page 517).

Tuberculosis (page 517). Dr. Harrell, a member of the Committee, moved that this body go on record as approving that State Sanatoria take tubercular diabetic patients.

Cancer (page 519). Dr. Lehman, chairman, reported that the C. & O. Hospital Cancer Clinic, under the direction of Dr. J. M. Emmett, had been certified since writing this report.

Industrial Health (page 519).

Coordination of Adjuncts of Medicine, i.e., Dentistry, Pharmacy and Nursing. Dr. Gorman, chairman, stated that the committee recommended that it be continued to study this problem and that this committee be named from Richmond in order to facilitate its work and meetings, and its recommendations be made to the component societies, and the committee be composed of doctors, dentists, nurses, pharmacists, and hospital superintendents or such members as the President may deem best. He felt the committee could work out a publicity program in way of education to the public explaining to them the shortage of doctors, nurses, pharmacists, and dentists, and asking their cooperation. Articles could be used in newspapers and on the radio, together with a printed statement which could be sent out from offices and in communications to patients.

Health Museum. Upon request of Dr. Fletcher Wright, chairman, who is now in the Service, Dr. R. J. Main sent the following report of what had been done in regard to the health museum:

TO THE HOUSE OF DELEGATES:

At the request of Dr. Wright I am reporting on the development and present state of the Virginia Health Museum, of which I am chairman. Dr. Fletcher J. Wright of Petersburg and his committee met with a group of interested people at one time, and Dr. Wright attended the second and final meeting of this committee. At that time it was decided to start this museum, to be located in the Valentine Museum for the duration of the war. Dr. Wright and his committee seemed to be in favor of your society being represented in this museum, and stated that he would approach you on this subject. I have heard nothing more from him, however. The museum has now been open some several months and is apparently visited by the majority of those going to the Valentine Museum. I understand that the visitors have evidenced considerable interest in the exhibits we have on display.

The societies represented with an exhibit at the present time are: Richmond Academy of Medicine, the Virginia Cancer Foundation, Virginia Dietetic Association, Medical College of Virginia, Virginia Nutrition Committee, Richmond Dairy Council, and the Virginia Tuberculosis Association.

Recently I wrote the Richmond Academy of Medicine stating that I believed that such a project should be sponsored and controlled by a medical group such as theirs or the Medical Society of Virginia, and expressed my hope that they or the State Society, or both, would see fit to take over this project; that in case they were not interested I hope that they would, or I would, take up this proposition with the State Society. One of my reasons for suggesting this procedure is that the A.M.A. is on record as encouraging their constituent societies to found and maintain such musea. If neither society is interested I will have to try to interest some lay group. The Richmond Academy of Medicine has requested some more information from me so that their board may discuss this proposition more intelligently.

In my opinion there is absolutely no doubt as to the public demand for and interest in such projects. Moreover, I believe in the long run this project will do far more to combat quackery in all forms than the voting of sums to defray the expense of legally prosecuting well established quacks.

Respectfully,

R. J. MAIN,
Chairman, Virginia Health Museum Committee.

To Study Clinical Laboratories (pages 519-20). Dr. R. D. Kimbrough stated that the resolution passed by the House of Delegates last year to appoint a committee for the study of clinical laboratories in Virginia was not intended to be asking for a survey or investigation of laboratories. The plan was for this committee to be prepared to advise the General Assembly, Health Department, or other agencies, as to possible standards, or requirements for clinical laboratories in Virginia. Also, to help decide whether clinical laboratories should be licensed, or required to meet certain requirements, and to advise on any other problems that may arise. He moved that this committee be continued with these instructions.

Delegates to American Medical Association (page 520).

Delegate to U. S. Pharmacopoeial Convention (page 520).

It was then moved, seconded and carried that the reports as a whole be adopted.

After this, Dr. E. P. Lehman presented the following resolution which was adopted:

WHEREAS, the VIRGINIA MEDICAL MONTHLY ranks by common consent among the two or three outstanding state medical journals of the country; and

WHEREAS, the high quality of the MONTHLY is largely the result of the judgment, the literary skill and the untiring and unselfish enthusiasm of its Editor, and

WHEREAS, Dr. Wyndham B. Blanton, Editor for the past ten years, is retiring at this session of the Medical Society of Virginia.

BE IT RESOLVED, that the House of Delegates go on record in appreciation of Dr. Blanton's unexcelled services, and

BE IT FURTHER RESOLVED, that the Secretary be instructed to express to Dr. Blanton in writing the gratitude of the Medical Society of Virginia.

Dr. C. L. Harrell moved that a committee be appointed to investigate the distribution of interns throughout the State and report to the Governor with an idea of having a more equitable distribution in defense areas. Seconded. Dr. Trout felt this was a problem of the Procurement and Assignment Board and it was not thought the Governor would be able to do anything about it. Dr. Harrell amended his motion omitting the words "and report to the Governor". This was carried.

Dr. J. L. Rawls asked the delegates to be on the lookout for a bill which might be introduced into Congress and would add an additional 3 per cent tax to the present Social Security Tax for National Hospital Insurance. This bill as proposed would pay the individual who required hospitalization $3.00 a day presumably for the hospital bill. However, it is paid to the person individually after he leaves the hospital, so in all probability the hospital could not count on it. In addition, $3.00 a day will not begin to pay the hospital bills at the present rate. This bill has not been introduced, but it is rumored that it will come up soon. When it does, please read it and if you think it is a vicious bill and will not serve the purpose intended, please communicate with your representatives in Congress and ask them to vote against it.

There being no further business, the House adjourned to meet again the following day immediately after the morning session.

October 6, 1942

The second meeting of the House of Delegates was held in the ballroom at 12:45 P. M., October 6, with Dr. Miller, President, presiding.

The Medical Economics Committee presented the following report:

The American Mutual Liability Insurance Company offers the members of the Medical Society of Virginia professional protection insurance on a state-wide group basis with identically the same premium charge applying to individual members throughout the state that is now in effect in the larger city and county component societies.

In addition, the company will require no extra or penalty premium for those of our members doing ethical contract practice, nor any extra premium for members in the specialties, nor any extra charge for members practicing in any partnership, nor will there be any extra premium charged those members who maintain cots in or adjoining their offices used for the comfort and convenience of patients undergoing treatment or minor surgery.

The company will return to its policyholders in this department, in cash or as a credit on the renewal of policies, the same rate of dividend declared on all of its business—whether its business with the members of the Medical Society of Virginia is profitable or not.

Two years after this business with the company has been in force, the company will render to the Medical Society of Virginia a complete report showing its premium income during that time and its payments and expenses made in the settlement and handling of claims. When this is done the company and the Medical Society of Virginia will be in a position to agree upon a rate based on the established experience.

The company's resources total nearly fifty million dollars, it does business in every state in the union, it has the highest rating awarded insurance companies, and our independent investigation of its manner of doing business in this state indicates clearly that it enjoys nation-wide confidence. The plan proposed is in successful operation in New York, Massachusetts, and other states, and your committee recommends its acceptance by our Society and we request the full cooperation of our members in its full development in Virginia.

GUY FISHER,
Chairman.

This was accepted.

The changes in the By-Laws were next taken up. These were to continue the dues as $7.00 through 1943 and 1944, and to omit Section 7 of Article VIII with regard to Councilor districts, until such time as the Judicial Committee might be able to work out a suitable plan. Adopted.

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The Nominating Committee gave the following slate, which was unanimously adopted:

President-Elect—Dr. C. B. Bowyer, Stonega.

Vice-Presidents—Dr. W. L. Powell, Roanoke.
Dr. W. R. Payne, Newport News.
Dr. P. W. Boyd, Winchester.

Secretary-Treasurer—Miss Agnes V. Edwards, Richmond.

Dr. J. M. Emmett, Clifton Forge, was to succeed to the Presidency following this meeting.

Councilors from the even numbered districts were named as follows for a term of two years:

2nd—Dr. Julian L. Rawls, Norfolk.
4th—Dr. J. L. Hamner, Mannboro.
6th—Dr. J. J. Giesen, Radford.
8th—Dr. H. B. Mulholland, University.

It being stated that there would be a vacancy for the 9th District due to the fact that Dr. Bowyer had been made President-Elect, Dr. W. C. Caudill, Pearisburg, was elected as councilor for the unexpired term of one year.

Dr. J. M. Hutcheson, Richmond, was elected delegate and Dr. Carrington Williams, also of Richmond, alternate to the American Medical Association for a term of two years, Drs. W. B. Martin and Roshier W. Miller holding over as delegate and alternate for another year.

Dr. W. O. Bailey moved that a vote of thanks be extended to the Roanoke Academy of Medicine for its splendid preparations and entertainment and to the Hotel Roanoke, it being felt that the service there had been almost perfect. This was unanimously adopted.

Dr. Frank Johns moved that the House of Delegates go on record as expressing thanks to Mr. Preston Collins for his work on our behalf in the last legislature. Carried.

The place of meeting for next year being left to the Council, Dr. Fisher moved that they be urged to decide on this as soon as possible so as to make reservations because of hotel space, etc. Seconded. Dr. Rawls did not believe any hotel could guarantee reservations a year from now as they do not know what the government is going to do. Dr. Fisher's motion was carried.

There being no further business, the House adjourned.

AGNES V. EDWARDS,
Secretary.

Approved:
ROSHIER W. MILLER,
President.

Auditor's Report
October 1, 1941-September 30, 1942

THE OFFICERS AND COUNCILORS,
MEDICAL SOCIETY OF VIRGINIA,
RICHMOND, VIRGINIA.

GENTLEMEN:

We have made an examination of the books of account of the Medical Society of Virginia for its fiscal year ended September 30, 1942, and present herewith our report thereon, consisting of the following financial statements and related comments.

EXHIBITS

"A" Balance Sheet.
"B" Statement of Income and Expense.
"C" Receipts and Disbursements—Special Funds.

Comments

The financial condition of the Society at September 30, 1942, is stated in the Balance Sheet, Exhibit "A". The assets and liabilities as of Setpember 30, 1941, and September 30, 1942, are shown in condensed form below:

	9-30-42	9-30-41
ASSETS:		
Cash	$23,985.60	$19,319.07
Accounts Receivable	1,420.48	1,255.94
U. S. Savings Bonds—At Cost	2,400.00	2,400.00
TOTALS	$27,806.08	$22,975.01
LIABILITIES AND RESERVE:		
Accounts Payable	$ 665.71	$ 688.70
Reserve for Special Funds	4,646.64	2,350.71
TOTALS	$ 5,312.35	$ 3,039.41
SURPLUS—GENERAL FUND:		
Excess of Assets over Liabilities	22,493.73	19,935.60
	$27,806.08	$22,975.01

The Income and Expenses of the General Fund for the fiscal year ended September 30, 1942, are detailed in Exhibit "B", prepared on the cash receipts and disbursements basis. The operations for both the current and preceding year are summarized as follows:

	YEAR ENDED	
	9-30-42	9-30-41
INCOME:		
Medical Society	$ 5,765.79	$ 5,522.12
Medical Monthly Publication	11,559.20	11,657.06
TOTALS	$17,324.99	$17,179.18
EXPENSES:		
Medical Society	$ 4,940.68	$ 5,302.46
Medical Monthly Publication	10,013.71	9,384.38
TOTALS	$14,954.39	$14,686.84
SURPLUS INCOME FOR YEAR	$ 2,370.60	$ 2,492.34

The foregoing table does not include the receipts and disbursements of the special commercial exhibits fund, and the special legislative committee fund. The transactions of these funds are given in Exhibit "C" of our report.

The membership dues are $7.00 annually and collections thereon are accounted for in the books of account as follows:

The General Fund expenses	$ 3.00
For Subscription to the Medical Journal	2.00
For Legislative Committee expenses	2.00

Cash balances as of September 30, 1942, and names of the depositories are listed below:

Checking Account:		
First & Merchants National Bank		$11,155.48
Savings Accounts:		
First & Merchants National Bank	$ 4,312.63	
Southern Bank & Trust Co.	3,072.91	
The Morris Plan Bank of Virginia	5,444.58	12,830.12
TOTALS		$23,985.60
Balances on deposit are for account of:		
General Fund	$19,338.96	
Legislative Committee Fund	4,646.64	$23,985.60

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Investment in United States Savings Bonds was as follows:

Cost	Value 9-30-42	Value At Maturity	Date Of Maturity
$ 525.00	$ 602.00	$ 700.00	February 1, 1946
1,500.00	1,600.00	2,000.00	October 1, 1949
375.00	395.00	500.00	March 1, 1950
$2,400.00	$2,597.00	$3,200.00	

Insurance protection carried as indicated by policies on hand shows:

Office Furniture and Fixtures	$ 1,000.00
Walter Reed Home, Belroi, Virginia	1,000.00
Fidelity Bond—Secretary-Treasurer	2,500.00

Accounts Receivable for membership dues, advertising, and subscriptions to the Medical Monthly publication are stated at collectible value as estimated by the executive Secretary-Treasurer.

All recorded cash receipts were found to have been properly deposited in bank, and disbursements were supported by satisfactory vouchers. Balances on deposit at the close of the year were independently confirmed and bonds owned were verified by inspection of the bonds on hand. The bookkeeping records for the year covered by our examination were found in proper order.

Respectfully submitted,

SHEPHERD, JACKSON & WIGGINS,
Certified Public Accountants.

Balance Sheet—September 30, 1942
Exhibit "A"

ASSETS

CASH:		
General Fund (Exhibit "B")	$19,338.96	
Special Fund (Exhibit "C")	4,646.64	$23,985.60
DUE FROM MEMBERS:		
(Estimated Collectible Value):		
1942 Dues—125 @ $7.00 each		875.00
ACCOUNTS RECEIVABLE:		
Virginia Medical Monthly:		
For Advertising	$ 519.48	
For Subscriptions (Estimated)	26.00	545.48
SECURITIES:		
United States Savings Bonds—At Cost (Current Redemption Value $2,597.00)		2,400.00
TOTAL ASSETS		$27,806.08

LIABILITIES AND SURPLUS

ACCOUNTS PAYABLE:		
For Preparation of MEDICAL JOURNAL—September, 1942 Issue	$ 503.51	
For Printing and Supplies	139.10	
For Social Security Tax	23.10	$ 665.71
RESERVE FOR SPECIAL FUND:		
Unexpended Cash Balance		4,646.64
SURPLUS—GENERAL FUND:		
Excess of Assets over Liabilities		22,493.73
TOTAL LIABILITIES AND SURPLUS		$27,806.08

Statement of Income and Expense
Fiscal Year Ended September 30, 1942
Exhibit "B"

MEDICAL SOCIETY OF VIRGINIA DIVISION

INCOME:	Actual	Budget
Membership Dues @ $3.00 each	$ 5,114.50	
Royalties on History of Medicine (Net)	43.75	
Interest on Savings Accounts (½)	92.80	
Commercial Exhibits—Net Income	69.52	
Refund by Department of Clinical and Medical Education—1940-41 Budget	445.22	
TOTAL	$ 5,765.79	

EXPENSES:			
Salaries (Apportioned):			
Secretary-Treasurer $1,800.00			
Clerical Assistance 990.00		$ 2,790.00	$ 2,790.00
Office Rent and Telephone		360.74	365.00
Stationery and Office Supplies		76.92	75.00
Repairs and Replacements		98.94	138.00
Postage		202.74	225.00
Audit Fee (½)		30.00	30.00
Society Security Tax (½)		23.10	28.88
Miscellaneous Expense		14.12	25.00
President's Expenses		12.50	100.00
President-Elect's Expenses		-----	50.00
Councilors and Officers' Expenses		30.04	75.00
Delegates to A.M.A. Convention		52.65	100.00
Delegate to U.S.P. Convention		41.22	41.22
Convention Expenses		520.85	610.00
Committee on Scientific Exhibits		236.54	350.00
Department of Clinical and Medical Education		367.70	1,200.00
Committee on Medical Economics		-----	75.00
Walter Reed Commission		24.00	75.00
Committee on Child Welfare		8.00	10.00
Committee on Maternal Health		11.50	20.00
Committee on Cancer		-----	20.00
Committee on Medical Preparedness		36.12	75.00
Committee on Industrial Health		3.00	20.00
TOTALS		$ 4,940.68	$ 6,498.10
SURPLUS INCOME FOR YEAR		$ 825.11	

VIRGINIA MEDICAL MONTHLY DIVISION

INCOME:	Actual	Budget
Advertising	$ 7,741.43	
Subscriptions:		
Membership Dues—@ $2.00 each	3,409.67	
Non-Members	315.31	
Interest on Savings Accounts (½)	92.79	
TOTAL	$11,559.20	

EXPENSES:		
Salaries (Apportioned):		
Secretary-Treasurer $1,800.00		
Clerical Assistance 990.00	$ 2,790.00	$ 2,790.00
Preparation of Journal (including Cost of Distribution)	6,605.83*	6,815.00
Office Rent and Telephone	361.74	365.00
Stationery and Office Supplies	46.37	35.00
Repairs and Replacements	98.96	138.00
Office Postage	38.06	45.00
Audit Fee (½)	30.00	30.00
Social Security Tax (½)	23.10	28.88
Miscellaneous Expense	19.65	20.00
TOTALS	$10,013.71	$10,266.88
SURPLUS INCOME FOR YEAR	$ 1,545.49	

*Includes cost of 50,000 mailing envelopes on hand at 9-30-42, $214.63. Also includes $100.00 for copy on legal medicine for November 1942 issue of the MEDICAL JOURNAL.

Summary of Operations

DIVISION	ACTUAL INCOME	ACTUAL EXPENSES	SURPLUS INCOME
Medical Society	$ 5,765.79	$ 4,940.68	$ 825.11
Medical Journal	11,559.20	10,013.71	1,545.49
TOTALS	$17,324.99	$14,954.39	$ 2,370.60

RECONCILIATION OF CASH BALANCE:	
Balance—October 1, 1941	$16,968.36
Add: Surplus Income for Year	2,370.60
BALANCE—SEPTEMBER 30, 1942	$19,338.96

Receipts and Disbursements—Special Funds For Fiscal Year Ended September 30, 1942 Exhibit "C"

COMMERCIAL EXHIBITS FUND:		
Cash Balance—October 1, 1941	$ 818.22	
Add: Receipts for the Year	443.33	
TOTAL AVAILABLE		$ 1,261.55
Disbursements for the Year	$ 1,192.03	
Transferred to the General Fund	69.52	
TOTAL ACCOUNTED FOR		$ 1,261.55
LEGISLATIVE COMMITTEE FUND:		
Balance—October 1, 1941	$ 1,532.49	
Receipts:		
Membership Dues @ $2.00 each	3,183.00	
Voluntary Contributions	1,366.00*	
TOTAL AVAILABLE		$ 6,081.49
Disbursements:		
Legal Services and Other Expenses		1,434.85
BALANCE—SEPTEMBER 30, 1942		$ 4,646.64
RECONCILIATION OF CASH BALANCE:		
Balance—October 1, 1941		$ 2,350.71
Add: Excess of Receipts over Disbursements for Year		2,295.93
BALANCE—SEPTEMBER 30, 1942		$ 4,646.64

*Solicited by the Legislative Committee for special work.

Book Announcements

Books received for review are promptly acknowledged in this column. In most cases, reviews will be published shortly after the acknowledgment of receipt. However, we assume no obligation in return for the courtesy of those sending us the same.

Facts for Childless Couples. By E. C. HAMBLEN, M.D., Associate Professor of Obstetrics and Gynecology, Duke University School of Medicine; Chief of the Endocrine Division of the Department of Obstetrics and Gynecology and Endocrinology, Duke Hospital, Durham, N. C. Charles C. Thomas, Springfield, Illinois. 1942. 103 pages. Cloth. Price $2.00.

Blood Substitutes and Blood Transfusion. Edited by Stuart Mudd, M.A., M.D., Professor of Bacteriology, University of Pennsylvania School of Medicine; and William Thalhimer, M.D., Director, Human Serum Division Public Health Research Institute of the City of New York, Inc. Charles C. Thomas, Springfield, Illinois. 1942. xiv-407 pages. Illustrated. Cloth. Price $5.00.

Doctors of the Mind. The Story of Psychiatry. By MARIE BEYNON RAY. Little, Brown and Company. Boston. 1942. xii-335 pages. Cloth. Price $3.00.

The Mind and Its Disorders. By JAMES N. BRAWNER, M.D., Medical Superintendent, Brawner's Sanitarium, Smyrna, Ga. Walter W. Brown Publishing Company, Atlanta, Georgia. 1942. 228 pages. Cloth. Price $3.50.

Fundamentals of Psychiatry. By EDWARD A. STRECKER, M.D., Sc.D., F.A.C.P., Professor of Psychiatry and Chairman of the Department, Undergradute School of Medicine, University of Pennsylvania; Psychiatrist to the Pennsylvania Hospital; and Attending Psychiatrist, Psychopathic Division, Philadelphia General Hospital. Philadelphia. J. B. Lippincott Company. 1942. xvii-201 pages. 15 illustrations. Cloth. Price $3.00.

When Doctors Are Rationed. By DWIGHT ANDERSON, Director Public Relations, Medical Society of the State of New York. And MARGARET BAYLOUS, Therapist, Charleston General Hospital, Charleston, W. Va. Coward-McCann, Inc., New York. 1942. 255 pages. Cloth. Price $2.00.

Bacteriology Laboratory Methods. By E. S. KING, M.D., Professor of Bacteriology, Bowman Gray School of Medicine of Wake Forest College; Bacteriologist to the Baptist Hospital, Winston-Salem, N. C. Charlotte Medical Press, Charlotte, N. C. 1941. 175 pages plus index. Cloth. Price $2.50.

Tables of Food Values. By ALICE V. BRADLEY, M.S., Associate Professor of Nutrition and Health Education, State College, Santa Barbara, California. Completely Revised and Enlarged. The Manual Arts Press, Peoria, Ill. 1942. 224 pages. Cloth. Price $3.50.

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The National Formulary. Seventh Edition. Prepared by the Committee on National Formulary. By Authority of the American Pharmaceutical Association. Official from November 1, 1942. Published by the American Pharmaceutical Association, Washington, D. C. 1942. viii-690 pages. Cloth.

The first U. S. Pharmacopoeia had its inception in January, 1817, when Dr. Lyman Spalding of New York City submitted to the Medical Society of the County of New York a proposal for the formation of a National Pharmacopoeia. Since then it has been revised at regular intervals of about ten years, the twelfth revision now being available, and effective from November 1, 1942.

Under existing plans the Pharmacopoeia will be continuously revised as occasion demands and a complete new revision issued every five years. Any changes made during this period, either in the articles already in the Pharmacopoeia or in the form of additions to those already present will be covered by Supplements issued from time to time. The first Supplement has already been issued, making changes in some of the pharmacopoeial monographs due to war conditions. For instance, physicians might already have noticed the difference between Tincture of Green Soap, U. S. P. XI and U. S. P. XII, the difference being due to the use of Oil of Cedar in the place of Oil of Lavender as a perfuming agent.

The U. S. Pharmacopoeias have all been outstanding books. This latest one however, gives evidence of being the best one published. It represents the endeavors of the best medical, pharmaceutical, and chemical experts in this country who have given freely of their talents and time.

The U. S. P. XII omits about 85 medicaments which were official in U. S. P. XI. Among the articles which have been dropped are Vinegar of Squill, Acriflavin, Asafoetida, Cantharides, Brown Mixture, Dover's Powders, and Mass of Mercury. About 160 drug and drug forms have been added. These include Aminoacetic acid, Bentonite, various tablet, capsule and ampule forms of medication, Totaquine, Insulin, Sulfanilamide, and Human plasma.

One of the most important changes made in so far as biologically assayed drugs are concerned is the change from the frog method of assaying digitalis to the cat method. It may be pointed out that the digitalis of U. S. P. XII will be somewhat less active than the digitalis of the U. S. P. XI.

Unfortunately, the U. S. Pharmacopoeia does not form a part of the library of a great many physicians. It can be a very important book to medical men and pharmacists alike and the reviewer recommends that all physicians have readily available a Pharmacopoeia for reference purposes. It contains a surprising amount of useful and accurate information concerning the more important drugs.

H. B. H.

New Books.

The following are recent acquisitions to the Library of the Medical College of Virginia and are available to our readers, the only cost being return postage:

Cole & Puestow—First aid; surgical and medical.
Conel, J. L.—The post-natal development of the human cerebral cortex. vol. 2.
Cowdry, E. V. ed.—Problems of ageing. 2nd edition.
Culbertson, J. T.—Medical parasitology.
Dieuaide, F. R.—Civilian health in wartime.
Dyke & Davidoff—Roentgen treatment of diseases of the nervous system.
Goldstein, K.—After effects of war neuroses.
Homans, G. C.—Fatigue of workers.
Jacobs, M. B.—War gases: their identification and decontamination.
Lambert, S. M.—A Yankee doctor in Paradise.
Langstaff, J. B.—Dr. Bard of Hyde Park.
Lewis, T.—Pain.
Lundy, J. S.—Clinical anesthesia.
McCollum, C. H.—Pills and Proverbs.
Miller, H. R.—Central autonomic regulations in health and disease.
Moritz, A. R.—The pathology of trauma.
Mudd, S.—Blood substitutes and blood transfusion.
Nash, J.—Surgical physiology.
National Research Council. Official military surgical manuals.
vol. 1—Ivy—Plastic and maxillofacial surgery.
vol. 2—Gradle—Ophthalmology and otolaryngology.
vol. 3—Graham—Abdominal and genitourinary injuries.
Regli, A.—The Mayos.
Smith, E. V.—The making of a surgeon.
Stedman's practical medical dictionary. 15th rev. ed.
Vandergrift, G. W.—Castor oil and quinine.
Wangensteen, O.—Intestinal obstructions.
Wise, C. A.—Religion in illness and health.

VIRGINIA MEDICAL MONTHLY

Official Publication of the Medical Society of Virginia

(Founded by Landon B. Edwards, M. D., April, 1874)

M. PIERCE RUCKER, M. D.,
Editor

AGNES V. EDWARDS
Business Manager

PUBLICATION COMMITTEE

M. PIERCE RUCKER, M. D., Richmond, *Chairman*
J. EDWIN WOOD, JR., M. D., University WYNDHAM B. BLANTON, M. D., Richmond.

All correspondence regarding editorial matter, original articles, and policy should be directed to the Editor. Questions relating to subscription rates, advertising, etc., should be addressed to the Business Manager, 1200 East Clay Street, Richmond, Virginia. The MONTHLY is not responsible for the opinions and statements of its contributors. All advertisements are accepted subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association. Annual Subscription, $2.00. Single Copies 25c.

VOL. 69. DECEMBER, 1942. No. 12

Editorials

Wyndham Bolling Blanton, M.D., Editor Emeritus.

WHEN banks and large corporations want a young and energetic head, they promote the president to the chairmanship of the Board of Directors. In this way they retain the benefits of the wisdom and experience of the old president while at the same time, they gain the advantage of the vigor and energy of the new president. Unfortunately, the VIRGINIA MEDICAL MONTHLY has no such position to offer Dr. Blanton, whose retirement as editor was announced in the November issue. We are happy to announce that Dr. Blanton is still a member of the Publication Committee, and the MONTHLY expects to continue to benefit by his rich scholarship. In the ten years that he has been editor of the MONTHLY, he has served the Medical Society of Virgina well. Under his editorship the VIRGINIA MEDICAL MONTHLY has increased in usefulness and attractiveness until now it is one of the best State journals in this country. It was with real regret that his resignation as editor was accepted.

Dr. Blanton was qualified for the position by both inheritance and training. His father, Dr. Charles Armistead Blanton, has been for years a leader in medical and educational circles in Richmond and in Virginia. Our retiring editor was graduated B.A. at Hampden-Sydney College in 1910, M.A. at the University of Virginia in 1912, and M.D. at the College of Physicians and Surgeons of New York in 1916. He did graduate work at Columbia, Edinburgh and Berlin. In 1918 he married Natalie Friend McFaden. As soon as he began the practice of his profession in Richmond in 1920, he took an active part in the State Society and in the Richmond Academy of Medicine. We remember well one of his early papers, a case report of anthrax contracted from a new shaving brush. His description was so vivid that we were tempted to turn out our whiskers. Mayor Bright, who at that time was a regular attendant of the Academy of Medicine, did grow a Van Dyke shortly afterwards. Besides various other articles in medical magazines, he has contributed to the Dic-

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tionary of American Biography; Richmond, Capital of Virginia; Today and Yesterday in the Heart of Virginia. He is the author of that outstanding State medical history, Medicine in Virginia in the Seventeenth Century, Medicine in Virginia in the Eighteenth Century and Medicine in Virginia in the Nineteenth Century. In 1933 Hampden-Sydney conferred upon him the honorary degree of Litt. D.

In the first World War, Dr. Blanton served as a volunteer with Dr. Joseph Blake at the American Ambulance Hospital, Neuilly-sur-Seine, 1915, Captain Medical Corp, U. S. Army, Ft. Benjamin Harrison and Ft. Snelling; Chief of Laboratory Service, Cantonment Hospital, Camp Custer, Mich. 1918-19. His teaching positions at the Medical College of Virginia have included Associate Professor of Medicine and Pro-

WYNDHAM BOLLING BLANTON, M.D.

fessor of the History of Medicine. Since 1939 he has been Professor of Clinical Medicine. He is a trustee of the Union Theological Seminary, Virginia; a Fellow of the American Medical Association and of the American College of Physicians; a member Richmond Academy of Medicine (president in 1929); Virginia Academy of Science; American Association of the History of Medicine; Tri-State Medical Association of the Carolinas and Virginia; Southern Medical Association (just elected vice-president at the 1942 meeting); American Clinical and Climatological Association; Society of Colonial Wars; Society of Cincinnati in Virginia; Pi Kappa Alpha; Phi Chi; Omicron Delta Kappa; Sigma Delta Chi; and Phi Beta Kappa.

Such is our retiring editor. In his last editorial he has outlined his aims and objects for the VIRGINIA MEDICAL MONTHLY. It will be our object to continue these ideals as far as our abilities and the times will permit.

Crawford W. Long and Ether Anesthesia

IN 1942 fell the hundredth anniversary of the first surgical anesthesia. We were interested to see how it was celebrated in various parts of the world. In Atlanta the Theater Guild wrote and put on a play depicting Crawford W. Long and his operation, which was greatly enjoyed by the local profession. (South. Surgeon 11:301, 1942). Dr. Frank Boland writes that the play was produced twice in Atlanta and once in Augusta at the meeting of the Medical Association of Georgia. In London A. D. Marston chose for his presidential address before the section of anesthetics of the Royal Society of Medicine, "The Centenary of the first Anesthetic Use of Ether" (Proc. Roy. Soc. Med. 35:279, 1942). The American Association of the History of Medicine had a paper by Dr. Hugh Young. At the section on the History of Medicine of the Richmond Academy of Medicine, Dr. Lownes Peple described vividly the ether frolics that led up to Long's discovery and the first operation upon Mr. Venable. He also presented Mr. P. A. Wilhite, a grandson of Dr. P. A. Wilhite, who was a pupil of Crawford W. Long, and who called Marion Sims' attention to Long's priority. It was Marion Sims' interest and influence and his article in the VIRGINIA MEDICAL MONTHLY (4; 81, 1877) in 1877, the year before Long's death, that started the movement towards the recognition of Long's great work. Mr. Wilhite gave to the Academy of Medicine some of his grandfather's papers relating to the discovery of anesthesia and some letters from Marion Sims. Hygeia (20:274, 1942) carried an article by Logan Clendening entitled "One Hundred Years of Anesthesia". The Journal of the Medical Association of Georgia carried an article, "The Centennial of the Golden Age of Anesthesia" by J. A. Doherty (31:106, 1942). Pender and Lundy start off their article upon anesthesia in war surgery (War. Med. 2:193, 1942) with "Since the first clinical use of ether as an anesthetic agent in 1842. . . ." Anesthesiology carried a series of exhaustive articles that began in the latter part of 1941 by T. E. Keys upon the development of anesthesia. W. H. Archer has a paper on the discovery of anesthesia in "Anesthesia and Analgia" (21:96, 1942) in which he half-heartedly concedes that Long was the first to make use of anesthesia, but that he had little if any influence upon the development of anesthesia. He quotes the action of the American Dental Association in 1664 to the effect that to Horace Wells, a dentist of Hartford, Connecticut, belongs the credit and honor of the introduction of anesthesia in the United States. He also quotes from the Transactions of the A. M. A. of 1870 "On motion of Dr. H. R. Storer of Massachusetts, it was resolved that the honor of the discovery of practical anesthesia is due to the late Dr. Horace Wells of Connecticut." This rearguard volley from the ranks of the dentists is the only discordant note in the 1942 volumes of praise of Crawford Williamson Long.

Since the appearance of Marion Sims' article in the VIRGINIA MEDICAL MONTHLY in 1877 (4:81, 1877) the growth of Long's fame has been progressive. In 1896 Dr. Hugh Young read a paper before the John Hopkins Hospital Medical Society entitled "Long, the Discoverer of Anesthesia: A Presention of his Original Documents" (Bull. Johns Hopkins Hosp. 8:174, 1897). In 1910 Long's original documents were exhibited at the British Medical Museum in connection with the meeting of the British Medical Association. The same year a monument to Long was unveiled at Jefferson, Georgia. In 1911 Dr. Dudley W. Buxton read a well documented paper before the Section of Anesthetics of the Royal Society of Medicine entitled, "Crawford Williamson Long, (1815-1879): The Pioneer of Anesthesia and the first to suggest and employ Ether inhalation during Surgical Operations." The next year the University of Pennsylvania erected a plaque by Tait McKensie, and on this occasion Jack DaCosta (Selections from the papers and speeches of John Chalmers DaCosta, Philadelphia,

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1931) gave an oration that will likely outlast the enduring bronze of McKensie. He says the claims of Long have found able champions in Sir James Paget, Dr. George Foy of Dublin, Dr. Hugh Young, Dr. Isham H. Goss, Dr. Luther Grandy, and Rose Pendleton Chiles. Dr. Francis R. Packard tells the story very impartially in his admirable "History of Medicine in the United States." In 1921 a monument to him was erected on the grounds of the University of Georgia at Athens, and in 1926 a shaft was erected at Danielsville, Georgia, his birthplace. It was also in 1926 that a marble statue of him as the first favored son of the State of Georgia was placed in Statuary Hall of the United States Capitol. In 1936 a handsome monument in Danielsville was unveiled, and the building in which the first operation under anesthesia was performed was marked with a suitable tablet.

The notorious ether controversy in the Congress of the United States lasted for years and the Congress reached no decision. Recently, the United States Government has recognized Long as the discoverer of anesthesia and has issued a postage stamp in his honor. The address of the Postmaster General James A. Farley at Jefferson, Georgia, when the stamp was put on sale, April 8, 1940, can be found in the Journal of the Medical Association of Georgia. (Aug. 1940). Illustrations of the various statues, monuments, and tablets in honor of Dr. Long, as well as portraits of many persons who were associated with him and his discovery, can be found in Dr. Young's excellent paper. (Bull. Hist. Med. 12:191, 1942.)

President's Message

I am pleased to have this opportunity to express to the profession in the State my sincere gratitude for the honor which has been conferred upon me. The Medical Society of Virginia has a long and distinctive history with a fine record of achievement as a result of the efforts of its membership. The honor of being President of this Society is a valued culmination of my professional ambition. You may be sure that I shall carry out to the best of my ability the mandates of our profession during the period of my incumbency. I am acutely aware of my own limitations, but I am consoled to feel that I shall have available to me the advice and guidance of the whole profession in Virginia during these troublesome times. With a common interest we shall jointly meet the issues as they arise this year.

During this period of our active attention to military matters many of our medical societies have cancelled their meetings and during the coming year other groups will probably plan not to have their annual meetings until the National Emergency is passed. Such a general cancellation of medical societies is, I think, justified, but we all hope that this curtailment of organized medical effort will be short lived. In view of the fact that many of our national and special societies will not meet during the coming year, I think an even greater responsibility rests upon our State Society to carry on during this period with a renewed vigor. It is probable that we can get sufficient transportation to get to our annual meeting place without too much difficulty. Organized medicine will function more satisfactorily if the doctors in our State can meet in a body and discuss their problems. The opinion that our Society should have an annual meeting next year was abundantly expressed at the recent meeting of the House of Delegates of the Medical Society of Virginia.

Strong special and standing committees have been appointed for the year's work. I hope that these committeemen will devote the same time and effort to their committee work as has characterized their efforts in the past. It is very regrettable that the Chairmen of two of our important committees feel that they could not continue with their chairmanships, namely, Dr. Wyndham Blanton, Chairman of the Committee on Publication and Program, and Dr. Dean Cole, Chairman of the Legislative Committee.

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Dr. Blanton has devoted a material effort in the publication of our journal for many years. The results of his work may be evaluated when one considers that our journal has a distinctive place with the best State journals in our country. This fine accomplishment is largely due to the intelligent and interested work which Dr. Blanton has manifested in our publication. Dr. Blanton will remain on the Committee to lend his assistance to our new editor, Dr. M. Pierce Rucker. I am sure that you will agree with me in my conviction that Dr. Rucker is adequately able to carry on our fine publication in its high state of efficiency. The medical profession in Virginia is aware of Dr. Rucker's scientific interest in medicine and the great contributions which he has made in his special field of obstetrics.

In the retirement of Dr. Dean Cole, as Chairman of the Legislative Committee, our Society has sustained a real loss. Dr. Cole has fought the battles of organized medicine in the State with determination, intelligence and perseverance. It is true that he has not won all of his battles, but certainly he has left a definite impression of our interest with the members of the Legislature. Any of these failures may be attributed to the lack of assistance given Dr. Cole by our profession. The work of the new Chairman of the Legislative Committee will be made easier as a result of Dr. Cole's fine efforts. The new Chairman of the Legislative Committee, Dr. Frank S. Johns, is wonderfully equipped to represent our interest in legislative matters. He will approach his problems with a planned program, intelligence and the fine degree of determination that has characterized his entire professional career. Dr. Johns will need the support of the entire membership of our Society during the coming year. Please remember when his call is made upon you that he is asking your help in the interest of organized medicine. Your response will be an evidence of your support of the profession in our State and your duty to the members of our profession who are away in military service. One of the obligations which we owe these men who have gone into the military service is to continue the high principles of the practice of medicine in Virginia so that when they return to us they will find the practice of medicine unchanged in our State.

J. M. EMMETT, M.D., *President,*
Medical Society of Virginia.

The following are committees appointed by Dr. Emmett.

Standing Committees

(The numbers after names indicate length of term of office, as the By-Laws provide that new members of Standing Committees shall be named by the incoming President for terms of three years, except in the case of the Department of Clinical and Medical Education.)

PUBLICATION AND PROGRAM: M. P. Rucker, M.D. (3), Richmond, *Chairman;* J. Edwin Wood, Jr., M.D. (2), Charlottesville; Wyndham B. Blanton, M.D. (1), Richmond.

SCIENTIFIC EXHIBITS AND CLINICS: W. Ambrose McGee, M.D. (2), Richmond, *Chairman;* M. J. Dreyfuss, M.D. (3), Clifton Forge; W. W. S. Butler, M.D. (1), Roanoke.

DEPARTMENT OF CLINICAL AND MEDICAL EDUCATION: Roshier W. Miller, M.D., Richmond, *Chairman;* Mr. George B. Zehmer, Charlottesville, *Executive Secretary;* I. C. Riggin, M.D., Richmond, *State Health Commissioner;* Lee E. Sutton, M.D., Richmond, Medical College of Virginia; H. B. Mulholland, M.D., Charlottesville, University of Virginia; J. W. Preston, M.D., Roanoke; Noland M. Canter. M.D., Harrisonburg.

LEGISLATION: Frank S. Johns, M.D. (3), Richmond, *Chairman;* G. Colbert Tyler, M.D. (3), Newport News; J. Morrison Hutcheson, M.D. (3), Richmond; C. D. Nofsinger, M.D. (2), Roanoke; B. F. Eckles, M.D. (2), Galax; James P. King, M.D. (2), Radford; Dean B. Cole, M.D. (1), Richmond; W. D. Kendig, M.D. (1), Kenbridge; Alex. F. Robertson, M.D. (1), Staunton.

MEDICAL ECONOMICS: Guy R. Fisher, M.D. (1), Staunton, *Chairman;* M. J. Payne, M.D. (3), Staunton; Frank C. Pratt, M.D. (2), Fredericksburg; A. B. Hodges, M.D. (2) Norfolk; H. A. Latane, M.D. (3), Alexandria; Carrington Williams, M.D. (1), Richmond.

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Societies

Medical Examining Board of Virginia.

At the meeting of the Board, held in Richmond, June 17-20, the following applicants were granted certificates to practice medicine in Virginia:

Dr. Samuel Thompson Adams, The Plains.
Dr. Hyman Hertzel Addlestone, Charleston, S. C.
Dr. Trogler Francis Adkins, Winchester.
Dr. Robert James Allen, Chattanooga, Tenn.
Dr. Thomas Blakely S. Baer, Huntington, W. Va.
Dr. William Ryland Bailey, Jr., Norfolk.
Dr. Wallace Edgar Baker, Petersburg.
Dr. Vincent Barber, Virginia Beach.
Dr. Maxwell Rufus Berry, Jr., Richmond.
Dr. Alfred Rives Berkeley, Jr., Charlottesville.
Dr. Henry A. Bonynge, Gordonsville.
Dr. Robert Lee Brickhouse, Norfolk.
Dr. Louis Percival Britt, Charlottesville.
Dr. George Kirby Brooks, Jr., Canal Zone, Panama.
Dr. James Marion Bryant, Philadelphia, Pa.
Dr. Lester James Buis, Richmond.
Dr. Lloyd Byron Burk, Jr., Seattle, Wash.
Dr. Carolina J. Buttrick, Hampton.
Dr. William Edward Byrd, University.
Dr. Eugene Mead Caffey, Jr., Charlottesville.
Dr. Malcolm Campbell, Abingdon.
Dr. Daniel Parker Card, Lexington.
Dr. James Walter Choate, Jr., Norfolk.
Dr. Eric Rudolph Clarke, Richmond.
Dr. Lintner Earl Clark, Charleston, S. C.
Dr. Jesse Newton Clore, Jr., Charleston, S. C.
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Dr. William Foscue Cox, Winston-Salem, N. C.
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Dr. Horace Emerson Cromer, Charlottesville.
Dr. William Grant Crook, Philadelphia, Pa.
Dr. James Edwin Cross, Charlottesville.
Dr. Edgar Lee Crumpacker, Roanoke.
Dr. A. J. Crutchfield, University.
Dr. Hiram Wilson Davis, Williamsburg.
Dr. Pauline Nichols Davis, Richmond.
Dr. William Ashby Davis, Agricola.
Dr. Gerald Fisk Dederick, Jr., Richmond.
Dr. Richard Laurens DeSaussure, Charlottesville.

Dr. Henry Price Deyerle, Harrisonburg.
Dr. Monroe Thomas Diamond, New York, N. Y.
Dr. Martin Donelson, Jr., Charlottesville.
Dr. Herbert Grasty Dickie, Jr., Charlottesville.
Dr. James William Dickie, Roseland.
Dr. Adolph Edward Drexel, Richmond.
Dr. Charles Robert DuGan, Philadelphia, Pa.
Dr. Robert George Dunn, Jr., Richmond.
Dr. Alexander Dworsky, Brooklyn, N. Y.
Dr. Edward Jones Evans, Huntington, W. Va.
Dr. Everett Idris Evans, Richmond.
Dr. George Edward Ewart, Richmond.
Dr. Clarence Clayton Fabric, Radford.
Dr. Harry Edwin Farver, Charlottesville.
Dr. Douglass Durston Fear, Roanoke.
Dr. Russell Sylvester Fisher, Detroit, Mich.
Dr. Glenn Taylor Foust, Jr., Charlottesville.
Dr. Charles Gabriel Fox, Jr., Louisville, Ky.
Dr. Everett Lyle Gage, Bluefield, W. Va.
Dr. David Hoge Gatherum, Madison, Wis.
Dr. Richard Connell Geringer, Roanoke.
Dr. Donald Roscoe Gilbert, Richmond.
Dr. Norman Ambrose Gililland, Alexandria.
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Dr. Bernard Gottfried, Brooklyn, N. Y.
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Dr. William Elgin Harman, Charlottesville.
Dr. Ernell Annie C. Harris, Franklin.
Dr. Chapin Hawley, Cincinnati, Ohio.
Dr. John Chrisman Hawk, Jr., University.
Dr. Ormond Lee Haynes, Wheeling, W. Va.
Dr. Edmund McKeill Henderson, Bridgewater.
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Dr. Joseph Ralph Kallet, Richmond.
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Dr. Hans Lent, Richmond.
Dr. Augustine Warner Lewis, Richmond.
Dr. Donald Wayne Linck, University.
Dr. Leon Linder, Clifton Forge.
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Dr. Mervin Hur Mitchell, Roanoke.
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Dr. Franklin L. Overton, Jr., Richmond.
Dr. Victor Page Owen, Richmond.
Dr. Carl Putnam Parker, Jr., Richmond.
Dr. Edwin Pearson Parker, III, Cincinnati, Ohio.
Dr. Seymour George Pelzer, Clinchco.
Dr. Kemp Plummer, Richmond.
Dr. Leonard David Policoff, Richmond.
Dr. Drake Pritchett, Danville.
Dr. Constantine N. Psimas, Portsmouth.
Dr. Oscar Lee Ramsey, Jr., Charleston, W. Va.
Dr. Barnie Murl Reagan, Calvin.
Dr. Duvahl Boone Ridgway, Roanoke.
Dr. Harry Charles Robelen, Jr., Richmond.
Dr. Walker Reynolds, Jr., Fairfield, Ala.
Dr. Catherine Mary Roth, Charleston, W. Va.
Dr. Richard Larcombe Schley, Jr., Savannah, Ga.
Dr. Ernst Schweiger, Portsmouth.
Dr. Sergei A. Serikoff, Roanoke.
Dr. William Hamilton Shafer, Charlottesville.
Dr. Thomas Berkeley Smith, Ashland.
Dr. Robert Richard Stanley, Atlanta, Ga.
Dr. Richard G. Stoneburner, Richmond.
Dr. Evelyn Louise Stull, Wilkes-Barre, Pa.
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Dr. James Albert Thompson, Jr., Madison, Wis.
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Dr. Herbert Edward Valentine, Jr., Emory University.
Dr. John Alden Vann, Norfolk.
Dr. Maurice Sidney Vitsky, Washington, D. C.
Dr. William Watkins Walton, Norfolk.
Dr. Oscar Wilde Ward, Jr., Richmond.
Dr. Herbert Fariss Webb, Richmond.
Dr. Frederick Dashiell White, Charlottesville.
Dr. David Calloway Whitehead, Norfolk.
Dr. Joseph L. Wilkerson, Durham, N. C.

*Certificate withheld pending completion of credentials.

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Dr. John Franklin Williams, Richmond.
Dr. Mervin Bowman Wine, Harrisonburg.
Dr. Reuben Franklin Wohlford, Roanoke.
Dr. Henry Wise Wood, Jr., Atlanta, Ga.
Dr. Frederick Ray Woodward, Los Angeles, Calif.
Dr. Leonard Jerome Yamshon, Haysi.
Dr. Charles Augustus Young, Jr., Norfolk.
Dr. Seymour Zaller, Hampton.
Dr. Nathan I. Zavadier, Richmond.
Dr. Arnold Milton Zetlin, Norfolk.
Dr. Isaac Myers Zigler, Broadway.
Dr. Walter Raymond Talmage, Petersburg (Homeopath).

James River Medical Society.

Officers of this Society for 1943 were recently elected as follows: President, Dr. J. H. Yeatman, Fork Union; vice-president, Dr. O. L. Huffman, Arvonia; and secretary, Dr. Garland Dyches (re-elected), Dillwyn.

The Clinch Valley and Wise County Medical Societies

Met on November 6th at Norton, with an attendance of about 45 members and several visiting physicians. Following a Dutch dinner, the societies were addressed by Dr. Herbert Acuff of St Mary's Hospital, Knoxville, Tenn., his subject being "The Diagnosis and Management of Upper Abdominal Conditions". Dr. C. B. Bowyer, Stonega, president-elect of the Medical Society of Virginia, acted as chairman of the meeting, and the program was arranged by the Wise County Society officers.

Rockingham County Medical Society.

At a recent meeting, the following officers were elected: President, Dr. H. Grant Preston, Harrisonburg; vice-president, Dr. B. W. Nash, Timberville; and secretary-treasurer, Dr. Thomas Scarlett, re-elected, Harrisonburg. This society meets the second Monday in November, February, May and August at the Rockingham Memorial Hospital in Harrisonburg.

Albemarle County Medical Society.

Dr. M. K. Humphries, Jr., Charlottesville, has been elected as secretary-treasurer to fill the unexpired term of Dr. E. W. Kirby, Jr., who is now in the U. S. Army. At a recent meeting, Drs. Robert T. Rutherford, Jr., and Lyle J. Hansbrough, both of the University, were elected to membership.

Norfolk County Medical Society.

At the meeting of this Society on November 16th, the program was presented by the hospital staff of the Marine Hospital, and the following papers presented: Some Aspects of Cardiac Infection by Dr. Leo Waitzkin; and Primary Atypical Bronchial Pneumonia by Dr. R. H. Smith.

Due to the fact that so many members of this Society have entered the Services, and those left do not have as much time at their disposal as they have had in the past, there will be only two meetings a month, these being on the 1st and 3rd Mondays. The first will be the usual business session, and the second will be for discussion of such medical matters as may be presented by selected speakers.

The Roanoke Academy of Medicine

Held its first regular monthly meeting on November 2nd. The following program was presented: Battle Casualties on the Home Front by Dr. Paul Davis; The Value of Fluids in Infancy and Childhood by Dr. Roger DuBose; and Virus Pneumonia and Its Treatment by Dr. John Giesen, invited guest of Radford.

New members taken in at this meeting are Drs. M. Marie Thomas, Albert G. Schnurman, and Douglass D. Fear.

Dr. Paul Davis is president of the Academy and Dr. Ruth Barnhart, secretary-treasurer.

The Hopewell Medical Association

Has re-elected its present officers for another year as follows; President, Dr. A. T. Brickhouse; vice-president, Dr. Oliver L. Jones; and secretary-treasurer, Dr. W. M. Phipps.

News

Buy Christmas Seals!

Help prevent a war time rise in tuberculosis by buying Christmas seals. Make them part of your Christmas giving.

Southern Medical Association,

At the meeting of this Association held in Richmond, November 10-12, there were approximately 1,400 doctors registered, with a total registration of

ladies, students, nurses, exhibitors, etc., of about 2,500. Dr. Harvey F. Garrison, Jackson, Miss., succeeded Dr. M. Pinson Neal to the presidency, and the following were elected: president-elect, Dr. W. T. Wootton, Hot Springs, Ark.; vice-president, Dr. Wyndham B. Blanton, Richmond; chairman of Board of Trustees, Dr. F. K. Boland, Atlanta, Ga.; and chairman of the Council, Dr. Lucien A. LeDoux, New Orleans, La. Mr. C. P. Loranz, Birmingham, Ala., is secretary-manager.

The executive committee of the Council, at its meeting in the late spring of next year, will decide on the place for the meeting in November 1943.

News From Medical College of Virginia.

Dr. Harvey B. Haag, professor of pharmacology, spoke before the staff of the George Washington University medical school on Facts about Tobacco Smoke of Interest to Physicians, October 29.

Dr. Porter P. Vinson, professor of bronchoscopy, esophagoscopy, and gastroscopy, addressed the International Medical Assembly of the Inter-State Postgraduate Medical Association of North America at Chicago, Ill., on October 30, on The Diagnosis and Treatment of Pulmonary Abscess.

Dr. I. A. Bigger, professor of surgery, recently gave two lectures before the Oklahoma City Clinical Society on Penetrating Wounds of the Thorax and Wounds of the Major Peripheral Vessels.

Dr. William B. Porter, professor of medicine, on November 4, participated in a refresher course in medicine at the Medical College of South Carolina, giving a paper on Cardio-Diaphragmatic Syndrome, taking part in a discussion of the various aspects of cardio-vascular disease and in a clinical-pathological conference.

The college has received a grant of $8,400 from the Office of Scientific Production and Research of the United States government for the continuation of research on shock, which is being done by Dr. E. I. Evans, assistant professor of surgery.

The veterans of Base Hospital 45, World War I, had as guests the present college unit, General Hospital 45, in Armistice Day exercises on November 11 at the Monumental Church at 12:00 noon. Dr. W. Lowndes Peple, representing Dr. Stuart McGuire, honorary commander of Base Hospital 45 Association, spoke briefly. The principal address was given by Colonel Fred Rankin, Medical Corps, United States Army. Following the exercises a luncheon was given by the college.

During the sessions of the Southern Medical Association in Richmond, November 10-12, many of the faculty of the college participated in programs, exhibits, and discussions. Many physicians attending the meeting were college visitors while in Richmond. Dr. J. C. Forbes, associate professor of biochemistry, and Dr. E. I. Evans, assistant professor of surgery, received honorable mention for their exhibits on Protective Action of Sulfanilimide Against Certain Liver Poisons, and Mrs. Louise Jones, instructor in anatomy, received a scientific award for her exhibit of gross anatomy of presacral and facial nerves.

News from University of Virginia, Department of Medicine.

Two gifts by anonymous donors have recently been made to the William James Rucker Convalescent Home for Children, one of $750 and another of $200.

Dr. H. E. Jordan and Dr. E. P. Lehman attended the annual meeting of the Association of American Medical Colleges in Louisville on October 26 to 28. Dr. Lehman made a report as Chairman of the Association's Committee on "The Teaching of Military Medicine".

Dr. C. C. Speidel, Professor of Anatomy, was awarded an honorary degree of Doctor of Science by his alma mater, Lafayette College, at the Founders' Day Exercises on October 23.

On Monday, October 19, Dr. C. P. Rhoads of Memorial Hospital in New York gave the third annual lecture of the Alpha Eta Chapter of Phi Beta Pi. He spoke on "Diet and Experimental Cancer Production".

On Monday, October 26, a motion picture of "The Biological and Clinical Activity of the Adrenal Cortex" was presented by the Upjohn Company in the Amphitheater.

Married.

Dr. Edwin C. Bryce, II, and Miss Helen Anne Cox, both of Richmond, November 10th. Dr. Bryce is a graduate of the Medical College of Virginia, class of 1938.

XUM

Lt. Claude Marshall Lee, Jr., MC., USNR., Richmond, and Miss Sibyl Elizabeth Scribner, Honolulu, November 7th. Dr. Lee received his medical degree from the University of Virginia in 1935.

Dr. Marion Lawrence White, Jr., and Miss Emma Cassandra White, both of University, November 21st. Dr. White graduated from the University of Virginia in 1937.

Dr. J. M. Bishop,

Roanoke, who reported to the Norfolk Naval Hospital, Portsmouth, in September, and was commissioned Lieutenant Commander, has been released from duty and has re-opened his office and resumed the practice of pediatrics.

Dr. E. G. Gill,

Roanoke, was elected vice-chairman of the section of ophthalmology and otolaryngology at the recent meeting of the Southern Medical Association.

Dr. Powell G. Dillard,

Lynchburg, has been appointed as City School Doctor to succeed Dr. J. Paulett Clark who died recently.

Dr. Guy Hinsdale,

Formerly Medical Director of the Greenbrier Hotel, White Sulphur Springs, is now located in Lewisburg, W. Va.

"The Greenbrier" Has New Name.

The Greenbrier Hotel at White Sulphur Springs, W. Va., which has recently been taken over by the Army as a General Hospital, has been named in honor of the late Colonel Percy M. Ashburn, Medical Corps, first Commandant of the Medical Field Service School at Carlisle Barracks, Pa.

Wanted.

Used short wave diathermy machine. Must be late model, in perfect condition, and reasonably priced. Full particulars. Dr. T. H. Massey, Smithfield, Va. *(Adv.)*

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Position by Virginia licensed physician, draft exempt. Prefer industrial or institutional practice. Able-bodied, single, experienced. Write "Doctor", care this journal. *(Adv.)*

Obituaries

Dr. Achilles Douglas Tyree,

Clifton Forge, died November 12th, at the age of fifty-two. He was a graduate of the Medical College of Virginia in 1911 and had practiced at several places before locating at Clifton Forge in 1923. Dr. Tyree was a member of the Medical Society of Virginia. His wife and a daughter survive him.

Dr. John Paulett Clark,

Well known physician of Lynchburg, died November 9th. He was seventy-two years of age and a graduate in medicine of the University of Virginia in 1896. Dr. Clark had served as school physician for Lynchburg since 1918. He had been a member of the Medical Society of Virginia for forty-five years.

Dr. Amos DeRussia Wood,

Bluefield, W. Va., died September 14th. He was a native of Floyd County, Va., and seventy-three years of age. Dr. Wood graduated from the College of Physicians and Surgeons, Baltimore, in 1893. He had been a member of the Medical Society of Virginia for forty-seven years.

Dr. Horton Ryan Casparis,

President of the Tennessee Tuberculosis Association and professor of Pediatrics at Vanderbilt University, Nashville, Tennessee, died of a heart attack on November 11th in Richmond while attending the meeting of the Southern Medical Association.

Dr. William Northam Trader,

Sonyea, N. Y., died October 11th, at the age of sixty-five. He was a graduate of the University of Virginia, Department of Medicine, in 1904.

Dr. Robert White Knox,

Houston, Texas, died September 27th. He was eighty-two years of age and a graduate in medicine from the University of Virginia in 1882. Dr. Knox was a past president of the State Medical Association of Texas.

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L. O. Snead, M. D.---Roentgenology
R. A. Berger, M. D.---Roentgenology
Helen Lorraine---Medical Illustration

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Albemarle County	R. V. Funsten, University	M. K. Humphries, Charlottesville	Monthly.
Alexandria City	J. C. McCluer, Alexandria	S. H. Williams Alexandria	Monthly.
Alleghany-Bath Counties	L. A. Houff, Clifton Forge	R. P. Hawkins, Clifton Forge	Bi-Monthly.
Amelia County	G. A. Arhart, Amelia	J. L. Hamner Mannboro	
Arlington County	H. L. Bastien, Arlington	J. R. B. Hutchinson, Arlington	January, April, July, August.
Augusta County	H. J. Morton, Staurts Draft	A. F. Robertson, Jr., Staunton	February, May, August, November.
Bedford County	M. P. Rucker, Bedford	W. V. Rucker, Bedford	Quarterly.
Botetourt County	L. A. Micou, Eagle Rock	E. B. Morgan, Fincastle	
Charlotte County	C. M. Nicholson, Charlotte C. H.	J. R. Bailey, Keysville	
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Fauquier County	V. L. McCullers, Remington	J. Frank Folk, Warrenton	Monthly.
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Fourth District and Southside	B. H. Knight, Surry	C. E. Martin, Emporia	5 times a year.
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Hanover County	J. A. Wright, Doswell	J. D. Hamner, Ashland	Bi-Monthly.
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Med. Soc. Northern Virginia	J. B. McKee, Winchester	J. E. Harris, Winchester	
Medical Society of Virginia	J. M. Emmett, Clifton Forge	Agnes V. Edwards, Richmond	
Mid-Tidewater Med. Society	A. W. Lewis, Aylett	M. H. Harris, West Point	January, April, July, October.
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Piedmont Med. Society	Percy Harris, Scottsville	E. D. Davis, Crozet	
Princess Anne County	R. W. Woodhouse, Va. Beach	R. A. Stata, Oceana	
Richmond Academy	B. R. Tucker, Richmond	Mary Martha Nokely, Richmond	2nd and 4th Tuesdays.
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Scott County	C. R. Fugate, Clinchport		
Seaboard Med. Assn.	G. Erick Bell, Wilson, N. C.	C. P. Jones, Newport News	Wilson, N. C., December 1-3, 1942.
Southampton County	Morgan Raiford, Franklin	W. T. McLemore, Courtland	April and September.
South Piedmont Med. Society	Bernard H. Kyle, Lynchburg	F. O. Plunkett, Lynchburg	Spring and Fall.
Southwestern Virginia	James P. King, Radford	G. C. Williams, Pearisburg	April and September.
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Tri-State Med. Assn. Va. & N. C.	A. G. Brenizer, Charlotte, N. C.	J. M. Northington, Charlotte, N. C.	February, 1942, Greenville, S. C.
Va. Neuropsychiatric Society	W. G. Crutchfield, University	E. H. Williams, Richmond	January, May, October.
Va. Orthopedic Society	B. H. Kyle, Lynchburg	C. E. Keefer, Lynchburg	Roanoke, Oct. 5-7, 1942
Va. Pediatric Society	W. L. Harris, Norfolk	E. A. Harper, Lynchburg	Roanoke, Oct. 5-7, 1942
Va. Peninsula Academy of Med.	A. A. Creecy, Newport News	E. B. Mewborne, Newport News	3rd Mondays.
Va. Radiological Society	Wright Clarkson, Petersburg	C. H. Peterson, Roanoke	Roanoke, Oct. 5-7, 1942
Va. Soc. Chest Physicians	P. B. Stafford, Sanatorium	E. C. Harper, Richmond	
Va. Society of Obst. & Gyn.	A. M. Groseclose, Roanoke	W. C. Winn, Richmond	Roanoke, Oct. 5-7, 1942
Va. Society of O. L. & O.	Guy R. Fisher, Staunton	Meade Edmunds, Petersburg	Staunton, 1942.
Va. Urological Society	L. D. Keyser, Roanoke	W. W. Koontz, Lynchburg	Roanoke, Oct. 5-7, 1942
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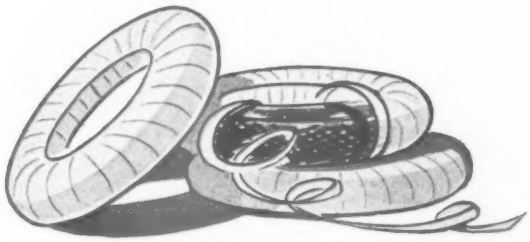

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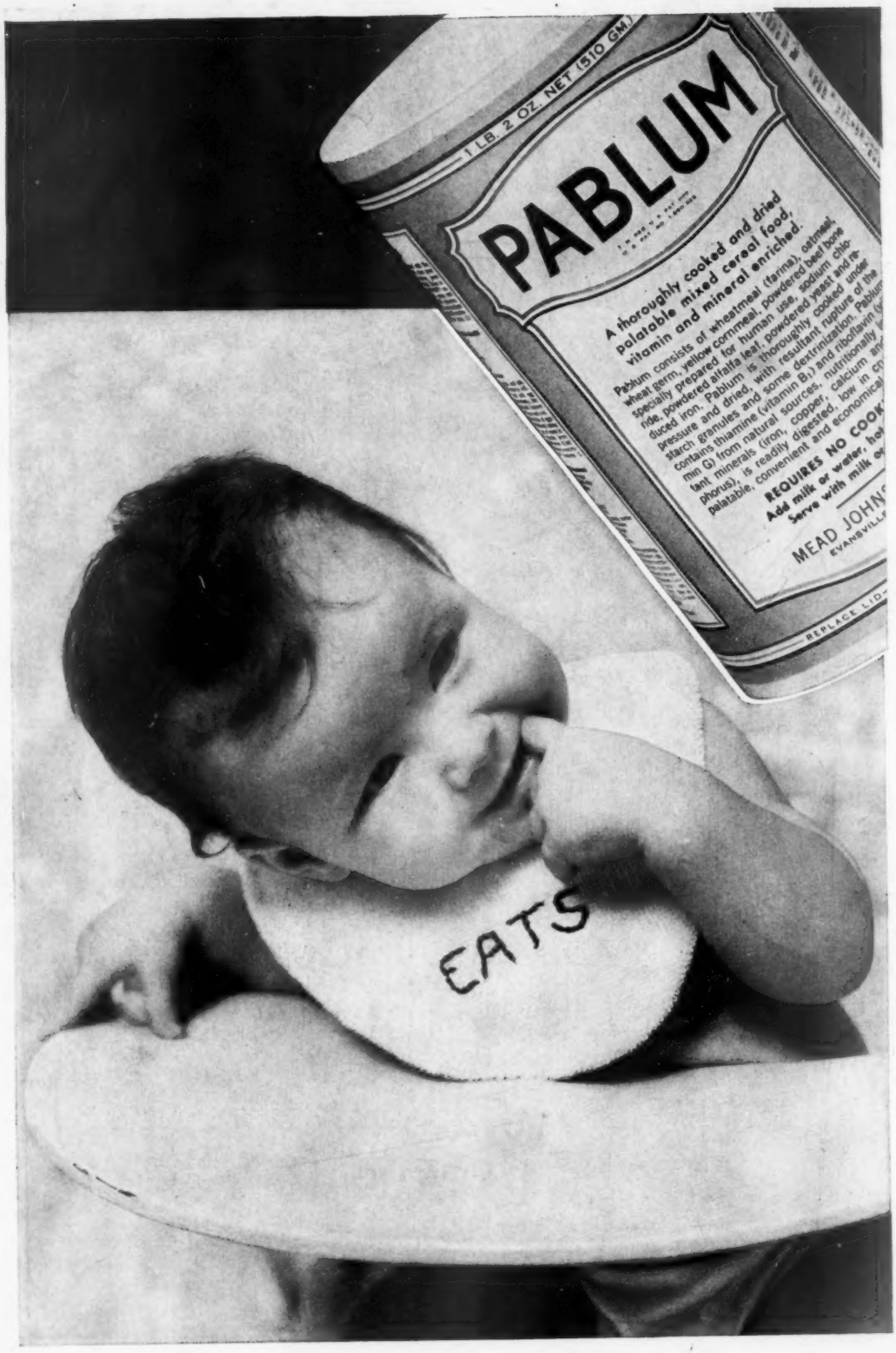
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